

Operator's Manual



McELROY

www.mcelroy.com



Test Caps

TP-300 Series





Warranty



LIMITED WARRANTY

McElroy Manufacturing, Inc. (McElroy) warrants all products manufactured, sold and repaired by it to be free from defects in materials and workmanship, its obligation under this warranty being limited to repairing or replacing at its factory and new products, within **5 years** after shipment, with the exception of purchased items (such as electronic devices, pumps, switches, etc.), in which case that manufacturer's warranty applies. Warranty applies when returned freight is prepaid and which, upon examination, shall disclose to have been defective. This warranty does not apply to any product or component which has been repaired or altered by anyone other than McElroy or has become damaged due to misuse, negligence or casualty, or has not been operated or maintained according to McElroy's printed instructions and warnings. This warranty is expressly in lieu of all other warranties expressed or implied. The remedies of the Buyer are the exclusive and sole remedies available and Buyer shall not be entitled to receive any incidental or consequential damages. Buyer waives the benefit of any rule that disclaimer of warranty shall be construed against McElroy and agrees that such disclaimers herein shall be construed liberally in favor of McElroy.

RETURN OF GOODS

Buyer agrees not to return goods for any reason except upon the written consent of McElroy obtained in advance of such return, which consent, if given, shall specify the terms and conditions and charges upon which any such return may be made. Materials returned to McElroy, for warranty work, repair, etc., **must have a Return Material Authorization (RMA) number**, and be so noted on the package at time of shipment. For assistance, inquiry shall be directed to:

McElroy Manufacturing, Inc.
 P.O. Box 580550
 833 North Fulton Street Tulsa, Oklahoma 74158-0550
 PHONE: (918) 836-8611, FAX: (918) 831-9285.
 EMAIL: fusion@McElroy.com

Note: Certain repairs, warranty work, and inquiries may be directed, at McElroy's discretion, to an authorized service center or distributor. TX02486-04-06-05

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 Tulsa, Oklahoma, USA
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All product names or trademarks are property of their respective owners. All information, illustrations and specifications in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.

DISCLAIMER OF LIABILITY

McElroy accepts no responsibility of liability for fusion joints. Operation and maintenance of the product is the responsibility of others. We recommend qualified joining procedures be followed when using McElroy fusion equipment.

McElroy makes no other warranty of any kind whatever, express or implied; and all implied warranties of merchantability and fitness for a particular purpose which exceed the aforesaid obligation are hereby disclaimed by McElroy.

PRODUCT IMPROVEMENT

McElroy reserves the right to make any changes in or improvements on its products without incurring any liability or obligation to update or change previously sold machines and/or the accessories thereto.

INFORMATION DISCLOSED

No information of knowledge heretofore or hereafter disclosed to McElroy in the performance of or in connection with the terms hereof, shall be deemed to be confidential or proprietary, unless otherwise expressly agreed to in writing by McElroy and any such information or knowledge shall be free from restrictions, other than a claim for patent infringement, is part of the consideration hereof.

PROPRIETARY RIGHTS

All proprietary rights pertaining to the equipment or the components of the equipment to be delivered by McElroy hereunder, and all patent rights therein, arising prior to, or in the course of, or as a result of the design or fabrication of the said product, are exclusively the property of McElroy.

LAW APPLICABLE

All sales shall be governed by the Uniform Commercial Code of Oklahoma, U.S.A.

**Register your product online to activate your warranty:
www.McElroy.com/fusion**

(Copy information listed on the machine nameplate here for your records).

Model No. _____

Serial No. _____

Date Received _____


Distributor _____



Safety



Safety Alerts

This hazard alert sign  appears in this manual. When you see this sign, carefully read what it says. YOUR SAFETY IS AT STAKE.

You will see the hazard alert sign with these words: DANGER, WARNING, and CAUTION.



Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



Indicates a hazardous situation which, if not avoided, may result in minor or moderate injury.

In this manual you should look for two other words: **NOTICE** and **IMPORTANT**.

NOTICE: can keep you from doing something that might damage the machine or someone's property. It may also be used to alert against unsafe practices.

IMPORTANT: can help you do a better job or make your job easier in some way.



WR00051-1-30-92

TX00030-12-1-92

Read and Understand

Do not operate this equipment until you have carefully read, and understand this manual, and all other equipment manuals that will be used with it.

Your safety and the safety of others depends upon care and judgment in the operation of this equipment.

Follow all applicable federal, state, local, and industry specific regulations.

McElroy Manufacturing, Inc. cannot anticipate every possible circumstance that might involve a potential hazard. The warnings in this manual and on the machine are therefore not all inclusive. You must satisfy yourself that a procedure, tool, work method, or operating technique is safe for you and others.

You should also ensure that the machine will not be damaged or made unsafe by the method of operation or maintenance you choose.



WR00052-12-1-92

TX00031-12-8-92



Safety



General Safety

Safety is important. Report anything unusual that you notice during set up or operation.

LISTEN for thumps, bumps, rattles, squeals, air leaks, or unusual sounds.

SMELL odors like burning insulation, hot metal, burning rubber, hot oil, or natural gas.

FEEL any changes in the way the equipment operates.

SEE problems with wiring and cables, hydraulic connections, or other equipment.

REPORT anything you see, feel, smell, or hear that is different from what you expect, or that you think may be unsafe.



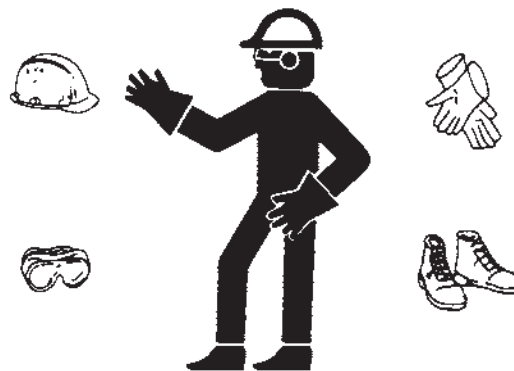
SAFE1ST.12-22-92

TX00114-4-22-93

Wear Safety Equipment

Wear a hard hat, safety shoes, safety glasses, and other applicable personal protective equipment.

Remove jewelry and rings, and do not wear loose-fitting clothing or long hair that could catch on controls or moving machinery.



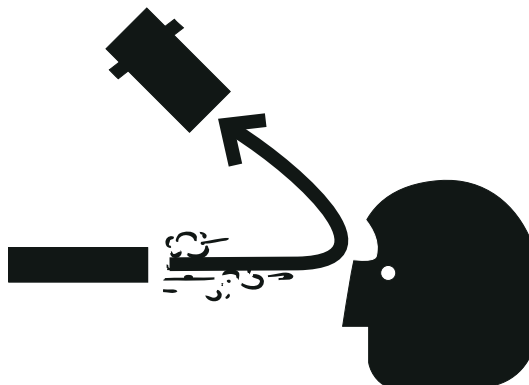
WR00053.12-2-92

TX00032-4-7-93

Pressurized Air Safety



This test equipment uses high pressure air which can cause severe injury or death from flying parts. Always install properly before pressurizing. Always relieve pressure before removing test cap. The test cap is designed for testing polyethylene pipe to a maximum of 165 psi. Be aware of yourself and others when using this equipment. Always stand to the side of test cap, never in front.



CD00144-6-2-95

TX00489-6-1-95



Operation



Introduction

Thank you for purchasing this McElroy product.

The TP-300 Series Test Caps are designed for quick and easy air pressure testing of Polyethylene pipe.

The many features include:

- Quick installation and removal
- Pressure rated to 165 psi
- One piece tool installs in one operation
- One cap required per pipe (OD) size
- Corrosion resistant material, durable construction
- The test cap is designed with a NPT 1/4" threaded female inlet.
- Grip plates secure cap in place
- Can not be pressurized unless cap is properly installed



PH02692-4-1-04

TX02255-3-8-04

Inspect Tooling

Inspect the grip plates in test cap. The plates must be clean to prevent slippage and ensure proper fit. Clean the plates of any dirt or residual material.

NOTICE: All four Grip Plates must be in place before using Test Cap.

Verify that the size marked on the test cap matches the size of the pipe being tested.

The O-ring is lubricated with silicone lubricant for ease of pipe installation. It may be necessary to lubricate the O-ring periodically. Use only Parker Super-O-Lube®. The lubricant is not intended to provide extra sealing capability.

Lubricating the O-ring:

1. First, remove the plates, one at a time, and then remove the spring.
2. Inspect the O-ring in the test cap for signs of damage. If an O-ring is scored or cut, it must be replaced. Apply the lubrication sparingly (1 or 2 drops) to the inside circumference of the O-ring, with your finger or swab (O-ring does not need to be removed).
3. Lastly, re-assemble test cap, spring first, then the grip plates one at a time.

NOTICE: Remove any grease, oil or any other foreign material from grip plates before use.

TX02256-3-8-04



PH00456-6-2-95



Operation



Insertion Depth

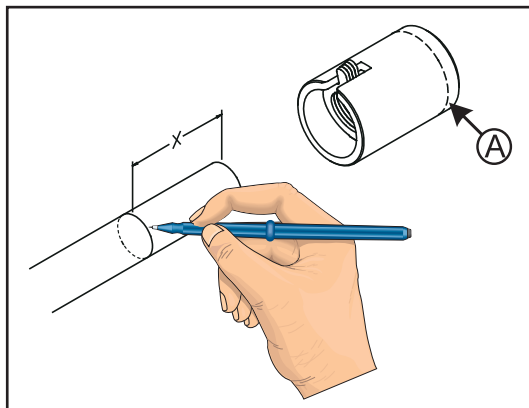
Measure and mark the insertion depth on the pipe before installing the test cap to ensure proper set up.

The gauge line (Caption "A" of diagram) on the outside of the test cap, is used for correctly marking the pipe to its proper insertion depth

To correctly mark the insertion depth, place the pipe alongside the test cap, marking the length from the gauge line (A) to the end of the test cap on the pipe.

Insertion depths for all sizes of test caps are shown in the table.

IMPORTANT: The proper gripping action of the grip plates requires that the pipe move out of the test cap as the pressure is applied. This movement can be as much as 3/8".



Size	Part #	Insertion Depth
1/2" CTS	TP-301	3-1/8"
1/2" IPS	TP-302	3-1/8"
3/4" CTS	TP-303	3-1/8"
3/4" IPS	TP-304	3-1/8"
1" CTS	TP-305	3-3/8"
1" IPS	TP-306	3-3/8"
1-1/4" CTS	TP-307	3-3/8"
1-1/4" IPS	TP-308	3-5/8"
1-1/2" IPS	TP-309	3-5/8"
2" IPS	TP-310	4-1/8"

TX02257-3-8-04

CD00180-1026-95

CD00637-1-2-01

Test Cap Lanyard

This device consists of a cable with rings on both ends. In the event that the test cap is accidentally dislodged, the lanyard is designed to minimize the travel of the test cap by wedging itself on the pipe and the cap plumbing. The lanyard may be required by your local regulations.

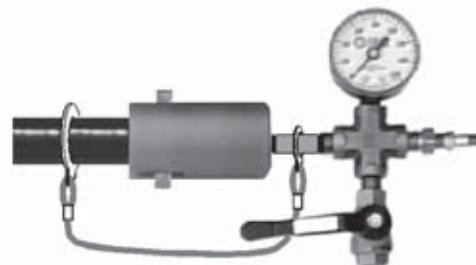
Install the adapter ring (smallest ring) of the lanyard around the fitting (user supplied) behind the test cap. This will ensure that the lanyard will remain secured to the test cap at all times.

Inspect the lanyard for damage or wear prior to each use. Replace if damaged or worn.



TX02258-3-8-04

PH02702-5-6-04



PH01238-4-1-04

Install Test Cap

Check the end of the pipe to be tested. Make sure the outside of the pipe is free of dirt and scratches that would prevent an airtight seal.

Slide the pipe ring (stamped with the pipe size) on to the pipe first. The hole in the pipe ring is designed to be larger than the OD of the pipe, allowing for an easy slip fit.

Pull back the tabs on the grip plates and fully insert the pipe (as straight as possible) into the test cap until the marked insertion depth is inline with the edge of the test cap. It may be necessary to rotate the cap as you install it. It is important that the pipe be inserted completely to minimize the possibility of leakage.

IMPORTANT: When insertion of the pipe is difficult: Chamfer the outside edge of the pipe. Never use grease or oil on end of pipe. If pipe is out-of-round, use a cold ring clamp to re-round the pipe.



PH01238-4-1-04



PH02701-5-6-04

TX02259-3-8-04

Conduct Pressure Test

Follow all applicable federal, state, local, and industry specific regulations to conduct the pressure test on the pipe. All components must be rated for the pressure supplied and testing requirements.

This illustration shows a typical setup for plumbing the test cap, with a customer provided gauge, filler valve and purge valve.

⚠️ WARNING This test equipment uses high pressure air which can cause severe injury or death from flying parts. Always install properly before pressurizing. Always relieve pressure before removing test caps. The test cap is designed for testing polyethylene pipe to a maximum of 165 psi.

A failed test may be due to nicks or scratches on the surface of the pipe end which would result in a seal that is not air tight.

If the test cap leaks after installation, check to make sure that the pipe has been fully inserted.



PH01238-4-1-04

TX02260-3-8-04



Operation



Bleed All Pressure

Bleed all pressure from the test line. Verify that all pressure has been bled by reading the gauge. The gauge should read zero psi.

⚠ WARNING Always relieve pressure before removing test cap. This test equipment uses high pressure air which can cause severe injury or death from flying parts.



PH02693-4-1-04

TX00494-6-1-95

Remove Test Cap

Pull back on the tabs of the grip plates.

Remove the test cap from the end of the pipe. It may be necessary to rotate the test cap to remove. Slide the pipe ring of the test cap lanyard off the tested pipe.

⚠ WARNING If test cap does not remove easily, there may be pressure in the line. Make sure all pressure has been bled from line before removing test cap.

NOTICE: Test caps are not designed to be used as a permanent cap.

TX02261-3-8-04



PH02700-5-6-04

Remove Pipe End

Cut and discard the pipe to a length of at least 1 inch beyond the furthest position that the safety lanyard pipe ring was situated.

NOTICE: The O-ring in test cap uses a lubricant which could contaminate a butt, socket or electrofusion weld. Always remove the end of the pipe that was inside the test cap before fusing any pipe or fittings.

TX02262-3-8-04



PH00450-6-2-95

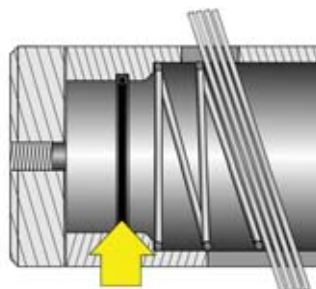
Preventive Maintenance

Inspect the test cap before each use.

Remove any grease, oil or other foreign material from grip plates.

Replace grip plates and lanyard if damaged or worn.

Care must be taken when storing the test cap to ensure the apparatus is kept free of dirt or other residual materials.



PH02703-5-6-04

TX02263-3-8-04

McElroy Manufacturing, Inc.
 The leader by design.
 Tulsa, Oklahoma U.S.A.

DRAWN: BWW CHECK: MLM
 TEST CAP ASSEMBLY

APPR'D: SRB

DATE: 11/19/04

DWG No: TP-300

SHT No: 1

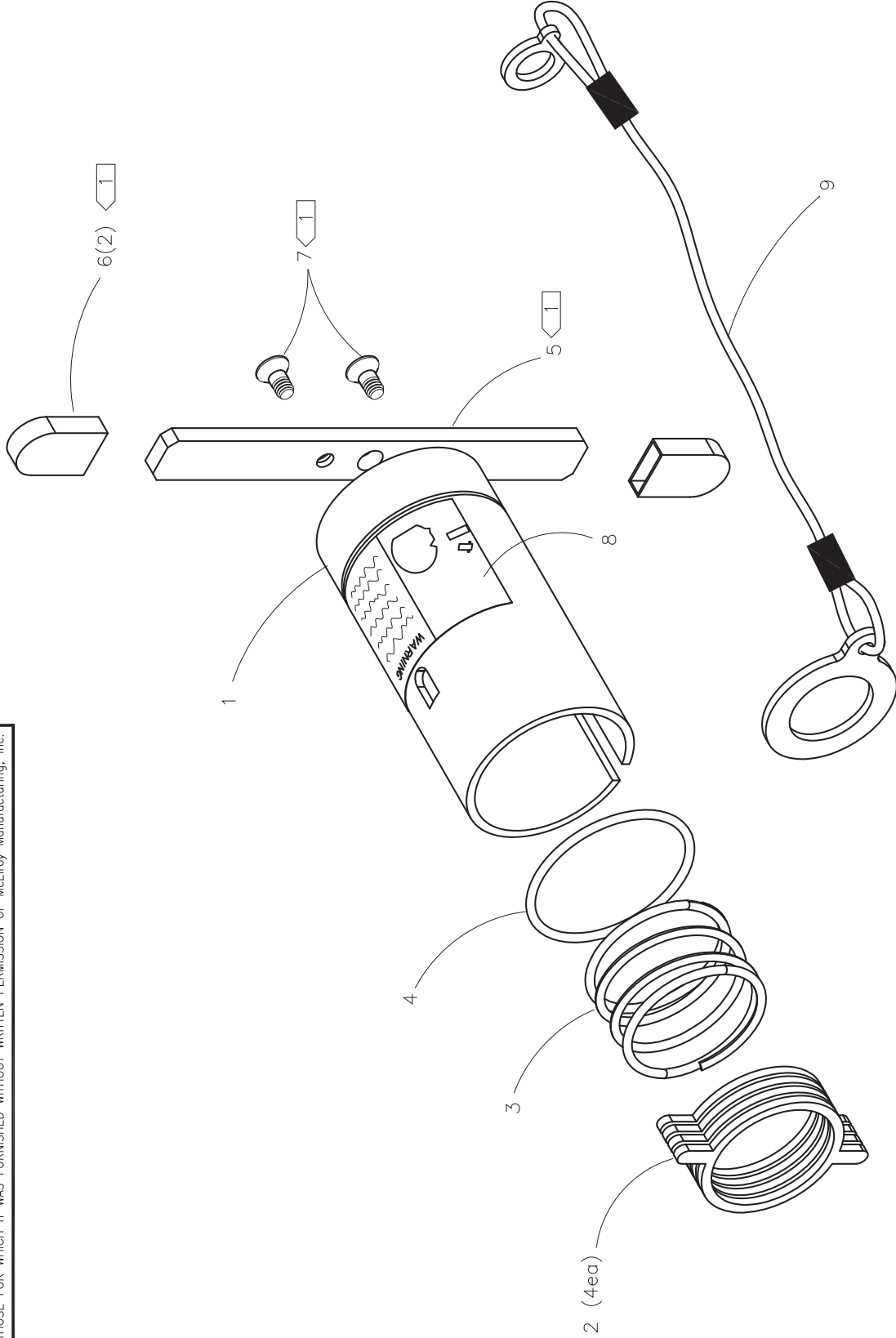
REV No:

PART No: TABULATED
 CAD No: TP-300

NOTE: THIS DRAWING AND THE INFORMATION CONTAINED THEREIN IS THE CONFIDENTIAL AND PROPRIETARY PROPERTY OF McElroy Manufacturing, Inc. THE DRAWING IS NOT TO BE REPRODUCED IN ANY MANNER, SUBMITTED OUTSIDE PARTIES FOR EXAMINATION, OR USED DIRECTLY OR INDIRECTLY FOR THE PURPOSES OTHER THAN THOSE FOR WHICH IT WAS FURNISHED WITHOUT WRITTEN PERMISSION OF McElroy Manufacturing, Inc.

NOTES:

1. PARTS FOR 2" IPS ONLY.



UNLESS NOTED OTHERWISE:
 (3) PLC. DIM'S .XXX = $\pm 0.005"$ ANGULAR DIM'S = $\pm 1/4"$ STAMP OR ETCH P/N ON ALL DETAIL PARTS
 (2) PLC. DIM'S .XX = $\pm 0.010"$ REMOVE ALL BURRS
 FRACTIONAL DIM'S = $\pm 1/32"$ BREAK ALL SHARP EDGES

SIZE AND DESCRIPTION

QTY.

ITEM

MMI NUMBER



Other McElroy Services



www.mcelroy.com

McElroy strives to stay on the leading edge of technology and innovation in the industry. Providing our customers with the tools to succeed is our number one priority. McElroy's web site has raised the standard for the fusion industry. We provide our customers with up-to-date information on McElroy products that includes assembly drawings, specifications, parts lists, and product manuals. We have also added product demonstration and technical animations.

TX02295-4-1-04

McElroy University

For over 30 years, McElroy Manufacturing, Inc. has been the only pipe fusion machine manufacturer to continuously offer advanced training to enhance your efficiency, productivity and safety in the proper use of our machines, at our facility, or yours. Our uniquely qualified McElroy University course instructors are professionals, each offering over 20 years industry experience.

Tuition costs vary by course attended. Each includes daily transportation to and from the McElroy Technical Center, lunches, and a complete course guide.

For course dates, tuition, registration information or details about on-site training at your location, please contact our representatives at McElroy Manufacturing today or register on-line at: www.mcelroy.com.

TX02296-4-1-04



The leader by design.

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