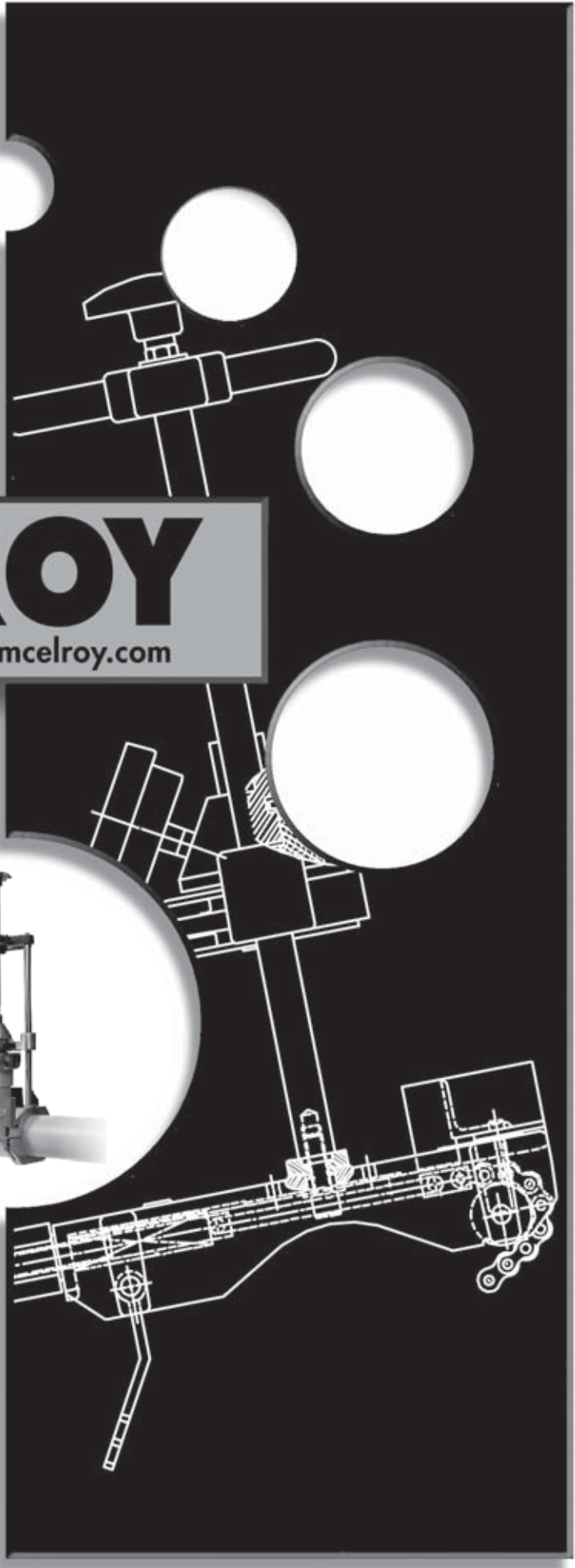


# Operator's Manual



# McELROY

[www.mcelroy.com](http://www.mcelroy.com)



Fusion Machine

# **SIDEWINDER®**

Patent No. 4,533,424

Manual: SW00301 Revision: M 05/17

This product and other products could be protected by patents or have patents pending. All the latest patent information is available at [patent.mcelroy.com](http://patent.mcelroy.com)

# Introduction

## Thank You for purchasing this McElroy product

The McElroy Sidewinder is a manually operated fusion machine for fusing 4" and smaller branch saddles, tapping tees and smaller saddle fittings onto all main sizes.

Units with a sidewall clamping assembly will quickly and easily adjust to any size main.

With reasonable care and maintenance, this machine will give years of satisfactory service.

Before operating this machine, please read this manual thoroughly, and keep a copy with the machine for future reference. This manual is to be considered part of your machine.



PH01477-1-3-98

TX00901-8-15-96

## McElroy University

For more than 30 years, McElroy has been the only pipe fusion machine manufacturer to continuously offer advanced training. Course offerings are meant to enhance your efficiency, productivity and safety in the proper use of McElroy machines. McElroy University classes are structured so that the skills learned and the machines used in each class closely match the machines found on pipelining jobsites. We offer training at our facility or yours. Our uniquely qualified McElroy University course instructors offer years of industry experience.

Tuition for each course includes lunches, course materials and a certificate of completion. Online registration, as well as up-to-date course offerings and dates, is available at [www.mcelroy.com/university](http://www.mcelroy.com/university)

This manual is intended as a guide only and does not take the place of proper training by qualified instructors. The information in this manual is not all inclusive and can not encompass all possible situations that can be encountered during various operations.



MU203-13-14

TX04659-03-24-14

# 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](mailto:fusion@McElroy.com)

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

## 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](http://www.McElroy.com/fusion)**

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

Model No. \_\_\_\_\_

Serial No. \_\_\_\_\_

Date Received \_\_\_\_\_

Distributor \_\_\_\_\_

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Tulsa, Oklahoma, USA

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# Fusion Equipment 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.

TX00030-12-1-92



WR00051:11:30:92

## Read and Understand

Do not operate this equipment until you have carefully read, and understand all the sections of 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

TX02946-4-15-09

# Fusion Equipment 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.



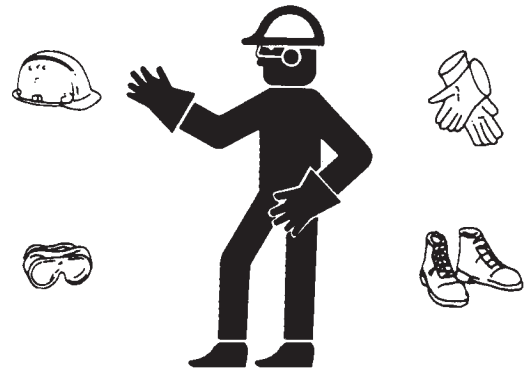
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## Wear Safety Equipment

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.



WR00053-122-92

TX00032-4-7-93

## Heater Is Not Explosion Proof



This heater is not explosion proof. Operation of heater in an explosive atmosphere without necessary safety precautions will result in serious injury or death.

If operating in an explosive atmosphere, the heater should be brought up to temperature in a safe environment, then **unplugged before entering** the explosive atmosphere for fusion.



WR00034-11-30-92

TX00100-04-28-14



# Fusion Equipment Safety

## Electrical Safety

**⚠️ WARNING** Always ensure power cords are properly grounded. It is important to remember that you are working in a wet environment with electrical devices. Proper ground connections help to minimize the chances of an electric shock.

Frequently inspect electrical cords and unit for damage. Have damaged components replaced and service performed by a qualified electrician.

Do not carry electrical devices by the cord.

**⚠️ WARNING** Disconnect the equipment from the power source before attempting any maintenance or adjustment. Failure to disconnect the power could result in electric shock.



TX02947-6-6-13

WR00055-4-7-93

WR00025-11-30-92

## Heater Is Hot

**⚠️ CAUTION** The heater is hot and will burn clothing and skin. Keep the heater in its insulated heater stand or blanket when not in use, and use care when heating the pipe.

**NOTICE:** Use only a clean non-synthetic cloth such as a cotton cloth to clean the heater plates.



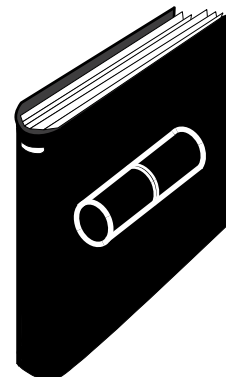
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## Fusion Procedures

Obtain a copy of the pipe manufacturer's procedures or appropriate joining standard for the pipe being fused. Follow the procedure carefully, and adhere to all specified parameters.

**NOTICE:** Failure to follow pipe manufacturer's procedure could result in a bad joint. Always follow pipe manufacturer's procedures.



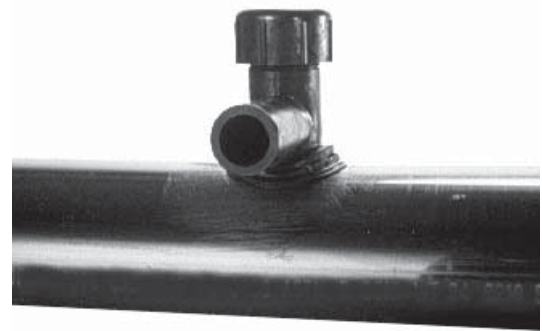
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WR00079-2-7-96

# Overview

## Theory of Heat Fusion

The principle of heat fusion is to heat two surfaces to a designated temperature, and then fuse them together by application of force. This pressure causes flow of the melted materials, which causes mixing and thus fusion. When the thermoplastic material is heated, the molecular structure is transformed from a crystalline state into an amorphous condition. When fusion pressure is applied, the molecules from each thermoplastic part mix. As the joint cools, the molecules return to their crystalline form, the original interfaces are gone, and the fitting and pipe have become one homogeneous unit. A strong, fully leak tight connection is the result.



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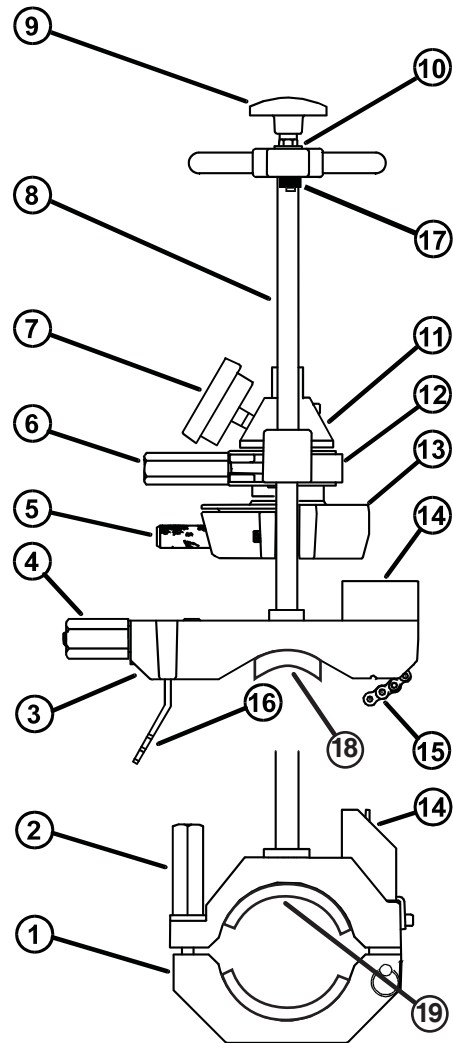
The principle operations include:

- Clamping** The pipe and fitting must be held firmly to allow all subsequent operations to take place.
- Cleaning** The area of pipe that the fitting will come in contact with must be cleaned and roughed up, as well as the base of the fitting.
- Aligning** The fitting must be properly seated on the pipe and then clamped in the machine for proper alignment.
- Heating** A melt pattern must be formed that penetrates into the pipe and into the fitting.
- Joining** The melt patterns must be joined with a specified force. The force must be constant around the interface area.
- Holding** The molten joint must be held immobile with a specified force until adequately cooled.
- Inspecting** Visually examine the entire circumference of the joint for compliance with standards established by your company, customer, industry, federal, state, or local regulations.

# Overview

## Nomenclature

- ① Jaw clamp assembly
- ② Jaw clamp Knob
- ③ Chain clamp assembly
- ④ Chain vice clamp knob
- ⑤ Pivot release master clamp knob
- ⑥ Moveable jaw clamp knob
- ⑦ Load cell pressure gauge
- ⑧ Guide rods
- ⑨ Drive screw knob
- ⑩ Reaction spring
- ⑪ Load Cell
- ⑫ Moveable jaw
- ⑬ Pivot release master insert assembly
- ⑭ Heater guide
- ⑮ Tailstock chain
- ⑯ Chain hook
- ⑰ Split Nut Assembly
- ⑱ Sidewall insert
- ⑲ Line pipe insert



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## Drive Screw

The drive screw is used to apply pressure. Turning the drive screw knob clockwise will apply pressure.

To release pressure, turn the drive screw knob counterclockwise until the gauge reads zero.

To disengage and move the drive screw, pull the drive screw out against the reaction spring until it clears the split nut assembly.



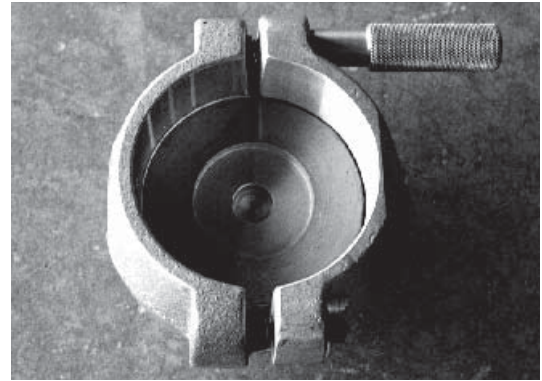
PH03045-5-27-05

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# Overview

## Pivot Release Master Insert Assembly

There is one for 3" IPS to hold inserts for smaller sizes (included with sidewinder). Another for 4" outlet, branch saddles (purchased separately).

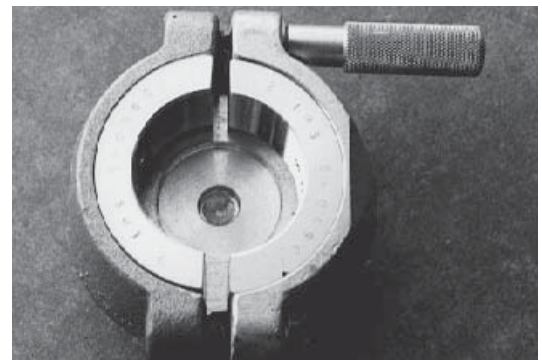


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## Master Fitting Insert

This is the master insert for a 2" outlet, branch saddles and certain tapping tees. Required for service saddle inserts.

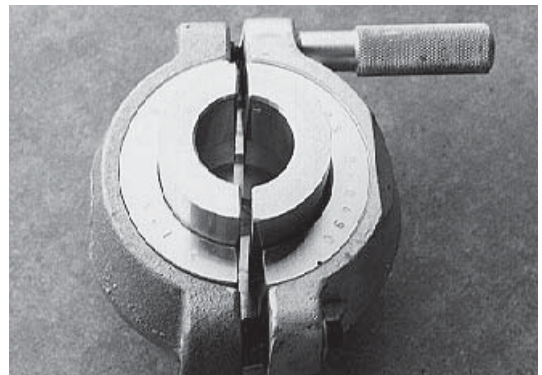


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## Service Saddle Insert

The service saddle insert requires the 2" master insert. The insert is for use with service saddles and multi-saddles.



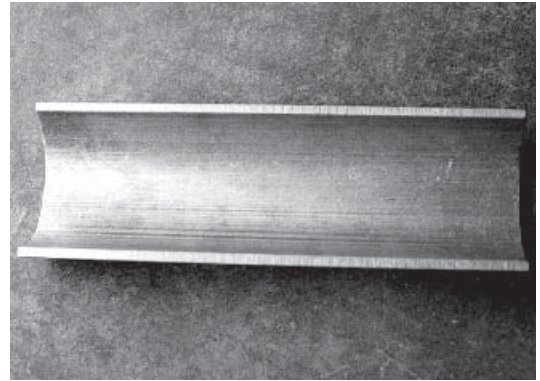
PH00812-4-22-96

TX00939-6-21-10

# Overview

## Line Pipe Bolster

The line pipe bolster is for chain clamp models only. It is installed on the opposite side of the pipe from the base of the chain clamp assembly. It is used for 1-1/4" to 8" pipe sizes.

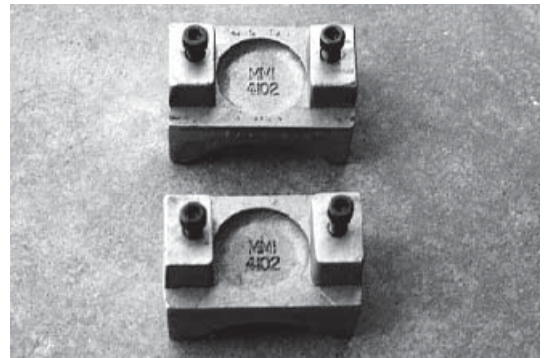


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TX00941-6-21-10

## Sidewall Inserts

Sidewall inserts are for chain clamp models only. They are used for 1-1/4" to 8" sizes.

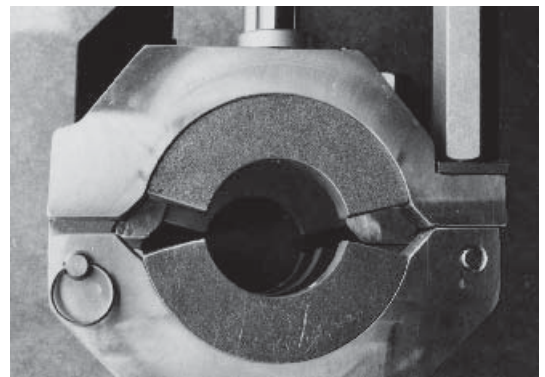


PH00815-4-22-96

TX00942-5-9-96

## Line Pipe Inserts

Line pipe inserts are for 2" and 3" pipe sizes. 2" inserts are required for 1-1/4" and 1-1/2" inserts. Line pipe inserts are for jaw clamp models only.



PH00816-4-22-96

TX00943-6-21-10

# Overview

## Heater



Heater is not explosion proof. Operation of heater in an explosive atmosphere without necessary safety precautions will result in serious injury or death.

If operating in an explosive atmosphere, heater should be brought up to temperature in a safe environment, then **unplugged before entering** the explosive atmosphere for fusion.

The heater has a green indicator light which will flash on and off. This indicates that the controller is operating normally. If the green indicator is not flashing then the controller may not be operating properly. If this occurs, disconnect power and have the heater repaired by an McElroy Authorized Service Center.

The heater temperature is controlled by a microprocessor. It has a red indicator light on the handle at the bottom of the temperature scale. When the heater is plugged in and preheating the light glows steadily until the set temperature is reached. The light then goes off and on slowly as the heater maintains temperature.

The heater body is not coated. Coated fusion heater adapters are available for all fusion applications.

**NOTICE:** The heater should never be used without fusion heater adapters installed.

To prevent a build-up of plastic pipe residue from accumulating on the heater plates (loss of surface temperature and pipe sticking may result), the heater plates should be cleaned with a non-synthetic cloth before every fusion joint.



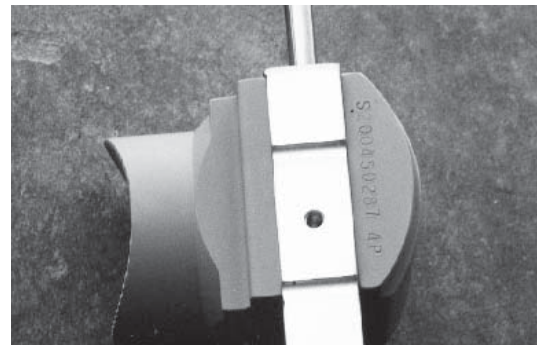
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TX02216-04-16-14

## Heater Adapters

Heater adapters are available for a variety of fittings.

**NOTICE:** The heater should never be used without heater adapters installed.



PH00818-4-22-96

TX00935-5-8-96

## Insulated Heater Sling

The heater should always be stored in the insulated heater sling or blanket for protection of the operator and to minimize heat loss and risk of mechanical damage. When placing the heater in the sling, allow the handle to remain outside the sling.



PH02329-4-29-02

TX00363-9-15-94

# Overview

## Heater Guide

The heater guide aligns the heater, so the melted area on the pipe will line up with the fitting when fusing.



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TX00936-7-30-10

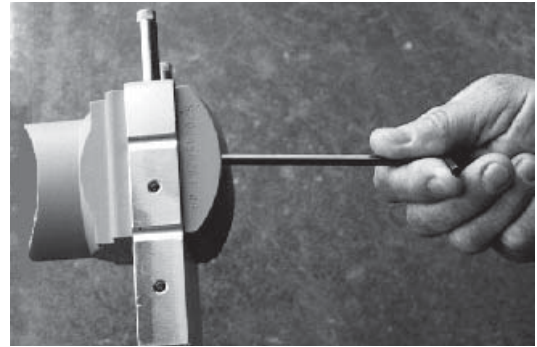
# Machine Setup

## Install Heater Adapters

Install heater adapters.

**NOTICE:** The heater should never be used without heater adapters installed.

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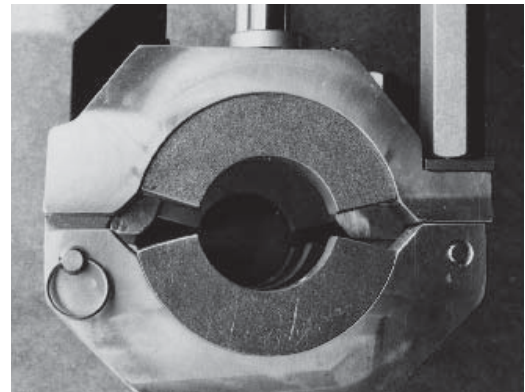
## Install Inserts

Select and install appropriate clamping inserts, sidewall inserts, and fitting inserts for the pipe and fitting being fused.

Install the appropriate sidewall clamping inserts to the tailstock with 1/4"-20 NC x 5/8" long socket head cap screws.

If fitting inserts are required for the movable jaw, secure with 1/4"-20 NC x 3/4" long FHSCS.

If fitting inserts are required for the Pivot Release Master Insert, secure with #6-32 NC x 1/2" long FHSCS.



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## Jaw Clamp Procedure

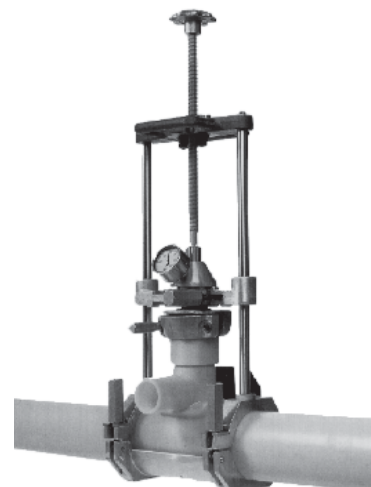
Loosen clamp knobs on base and open lower jaw.

Place the unit on the pipe in the desired position, swing the lower jaw assembly around the pipe until the jaws are back together and tighten the clamp knobs.

**IMPORTANT:** When working in a confined area, remove the ball detent pivot pins from the jaw clamp. Place the lower jaw under the pipe, then position the Sidewinder on top of the pipe. Align the jaws and pivot pin holes and insert the pivot pins.

Swing the lower jaw assembly under the pipe and tighten the clamp knobs.

TX00909-4-11-96



PH00821-4-22-96



# Machine Setup

## Chain Clamp Procedure

Loosen the sidewall clamp knobs and remove the chains from the chain hooks.

Place the Sidewinder on the pipe in the desired vertical or horizontal position. Center the line bolster on the pipe opposite the Sidewinder.

Bring the chains around the pipe and bolster and lock in the chain hooks. Tighten the sidewall clamp knobs until the pipe conforms to the clamping inserts and line bolster.



PH00783-5-3-96

TX00905-6-21-10

## Cold Weather and Coiled Pipe Clamping Procedure

Coiled polyethylene pipe becomes very stiff and hard to handle when cold. In these conditions, sidewall fusion with the sidewinder becomes more difficult and requires extra procedures in setting up the machine.

More clamping force than usual will be needed to straighten the pipe, caution must be taken not to exceed maximum gauge pressure.

**NOTICE:** Exceeding the maximum gauge pressure could damage the gauge.

Back the clamp knobs out to within 1-1/2 or 2 threads left on the eye bolt and place the machine on the pipe.

It is more difficult to install the machine on the inside curvature of the pipe than the outside. For this reason, it may be necessary to rotate the machine slightly to get the clamp knobs in the proper position. When the clamp knobs are in the proper position, the machine can be rotated to the desired position and the clamp knobs tightened.

Install a fitting in the pivot release master. The fitting will exert pressure and help straighten the pipe.

Use the drive screw to help straighten the pipe and tighten one side of the pipe clamp. An 8' crescent clamp may be necessary to achieve full rounding and straightening. Do not exceed maximum gauge pressure.

Back the drive screw off as the clamp knobs are tightened, so maximum gauge pressure is not exceeded.

After clamping one side, continue this process on the opposite side, making sure the gauge pressure is not exceeded.



PH00821-5-3-96

TX01444-6-21-10

# Operation

## Read Before Operating

Before operating this machine, please read this manual thoroughly, and keep a copy with the machine for future reference.

The fusion procedures in this manual are for use with polyethylene pipe. If fusing other thermoplastic pipe materials, refer to the pipe manufacturer's suggested procedures or appropriate joining standard.

TX02953-4-15-09



Step-5-6-96

## Prepare Heater



**DANGER** Heater is not explosion proof. Operation of heater in an explosive atmosphere without necessary safety precautions will result in serious injury or death.

If operating in an explosive atmosphere, heater should be brought up to temperature in a safe environment, then unplugged before entering the explosive atmosphere for fusion.

Install appropriate heater adapters.

**NOTICE:** The heater should never be used without heater adapters installed. Only install heater adapters when the heater is cool. Refer to the "Machine Setup" section of this manual.

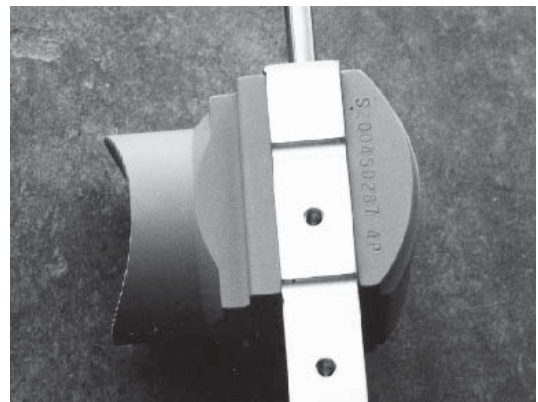
Place heater in insulated heater sling allowing the handle to remain out of the sling and plug heater into a proper power source.

Allow heater to warm-up to operating temperature.

**NOTICE:** Incorrect heating temperature can result in bad fusion joints. Check heater plate surface temperature periodically with a properly calibrated pyrometer, and make necessary adjustments.

Refer to the "Maintenance" section of this manual for instructions on how to adjust heater temperature.

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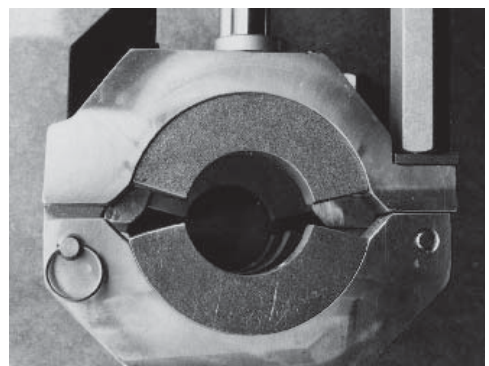


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## Install Clamping Inserts

Check all inserts for proper size. Assure that the appropriate clamping inserts are installed for the fitting and pipe to be fused.

TX00922-5-6-96



PH00816-4-22-96

# Operation

## Attaching Machine to Pipe

Refer to the "Machine Setup" section for attaching the machine.

Place the machine on the pipe in the desired vertical or horizontal position. Tighten the clamp knobs until the pipe conforms to the clamping inserts.

**NOTICE:** Do not overtighten when clamping on the pipe. Overtightening can flatten the pipe and make it difficult to obtain a melt pattern



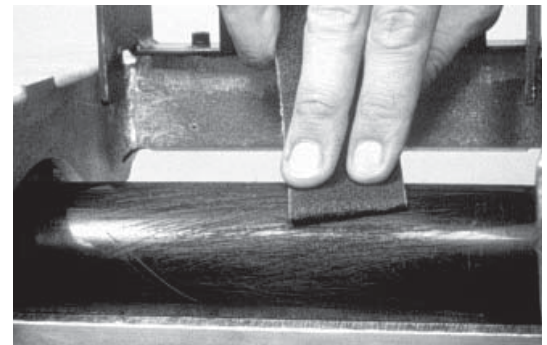
PH00783-5-9-96

TX00951-5-13-96

## Preparing the Pipe

Clean the pipe in the area the fitting will come into contact.

Rough up the pipe with 50 or 60 grit utility cloth, scraping tool, or other procedure specified by the pipe manufacturer, fitting manufacturer, or applicable standard.



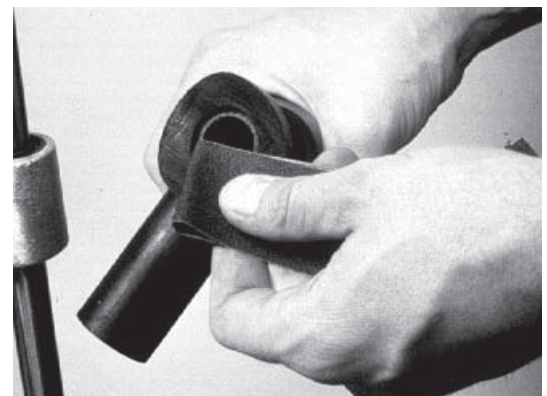
PH00787-4-3-96

TX00923-7-30-10

## Preparing the Fitting

Clean the base of the fitting.

Rough up the pipe with 50 or 60 grit utility cloth, scraping tool, or other procedure specified by the pipe manufacturer, fitting manufacturer, or applicable standard.



PH00788-4-3-96

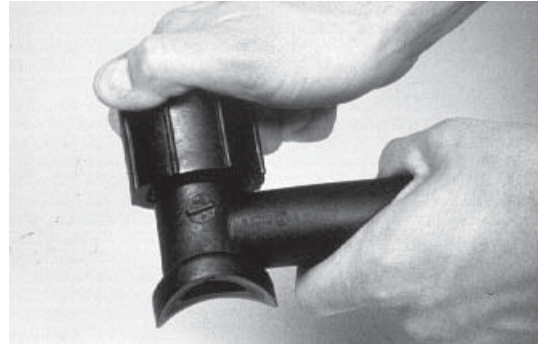
TX00924-7-30-10

# Operation

## Tighten Fitting Cap

If the fitting has a cap, tighten the cap before installing in pivot release master insert assembly.

TX00925-7-30-10

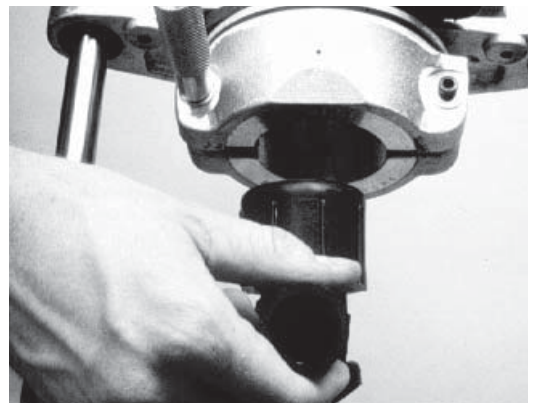


PH00826-5-3-96

## Installing the Fitting

Insert fitting into pivot release master insert or movable jaw without clamping on it. Release the drive screw and push the fitting down to the pipe.

TX00926-7-30-10



PH00786-4-3-96

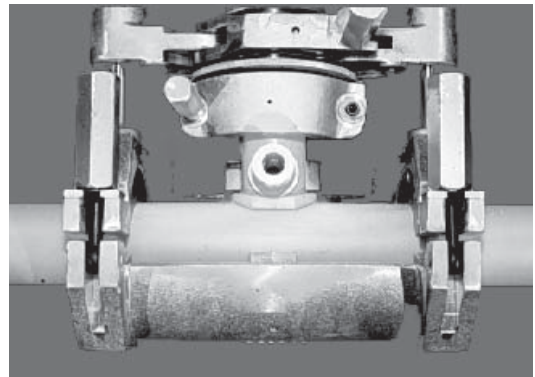
## Seating the Fitting

Make sure the fitting is seated properly on the pipe and tighten the pivot release master insert enough to secure the fitting in the unit.

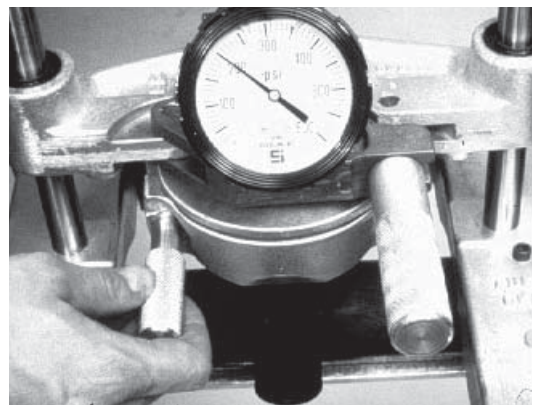
**NOTICE:** Do not overtighten.

Release the machine pressure.

TX00927-5-7-96



PH00828-8-15-96



PH00827-5-3-96

# Operation

## Inserting Heater



**DANGER** The heater is not explosion proof. Operation of heater in an explosive atmosphere without necessary safety precautions will result in serious injury or death.

If operating in an explosive atmosphere, the heater should be brought up to temperature in a safe environment, then **unplugged before entering** the explosive atmosphere for fusion.

Use a clean non-synthetic cloth to clean the butt fusion heater surfaces.

Check the heater with a pyrometer to make sure it is at the right temperature.

Raise the fitting off the pipe enough to insert the heater.

Insert the heater and lower the fitting down on top of the heater. Support the heater during heating cycle, making sure the melt pattern is established in the proper area. If the heater handle is not supported, the heater may shift down, causing an improper melt.

Follow the pipe and fitting manufacturer's time, temperature and pressure recommendations for the heating cycle.

TX00929-06-17-14



PH04339-730-10

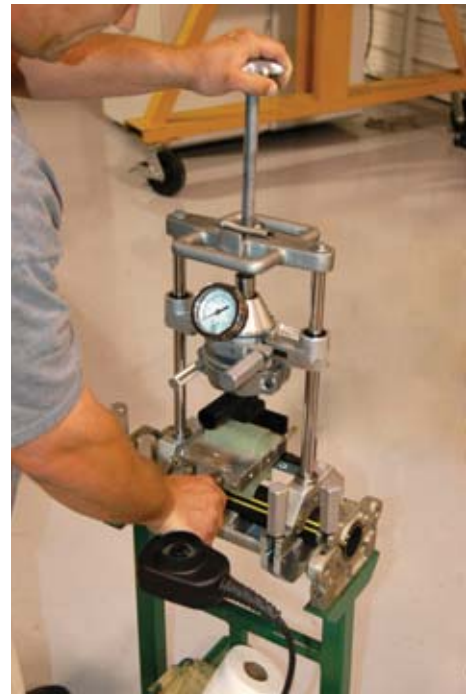
## Removing Heater

Pull the drive screw forward to clear the split nut and pull upward on the drive screw while giving the heater handle a downward snap action with your hand. This will break the bond between the heater and the fitting, so the fitting can be raised and the heater easily removed.

When using high volume tapping/punch tees it will probably require two people. One person handle the heater and the other to disengage drive screw and pull fitting away from pipe.

Inspect for complete melt pattern. If melt pattern is not complete, finish the fusion and decommission the fitting.

TX00930-9-22-10



PH04442-922-10

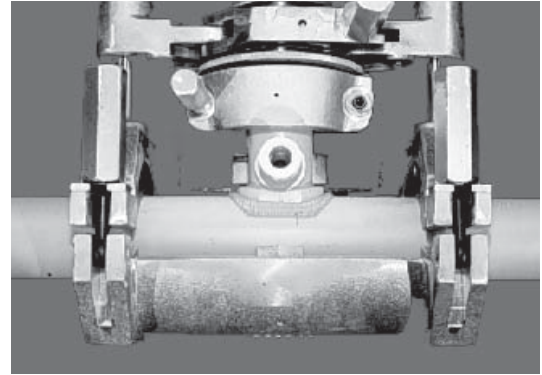
# Operation

## Fusing Fitting to Pipe

After removing the heater, immediately bring the fitting down to the pipe, apply fusion pressure. Maintain pressure until cooling time is complete.

**NOTICE:** Failure to follow pipe manufacturer's heating time, pressure and cooling time can result in a bad joint.

TX00931-9-22-10

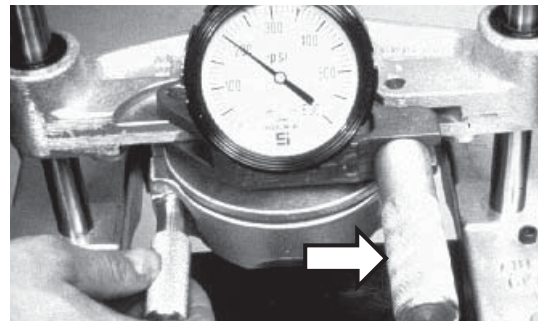


PH00846-8-12-96

## Disengage Pivot Release Master

Unscrew pivot release clamp knob to disengage pivot release master insert assembly from fitting.

TX00932-9-22-10



PH00827-8-15-96

## Unclamp and Remove Machine

Loosen clamp knobs on base. Open jaws or disengage chains and remove the machine.

TX00933-5-7-96



PH00784-5-3-96

# Maintenance

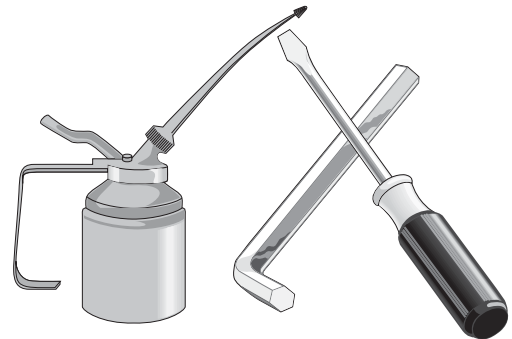
## Preventative Maintenance

To insure optimum performance, the machine must be kept clean and well maintained.

With reasonable care, this machine will give years of service. Therefore, it is important that a regular schedule of preventive maintenance be kept.

Store machine inside, out of the weather, whenever possible.

TX00428-8-10-95



CD00142-11-2-94

## Washing the Machine

The machine should be cleaned, as needed with a soap and water wash.

Do not pressure wash.

TX00429-04-28-14

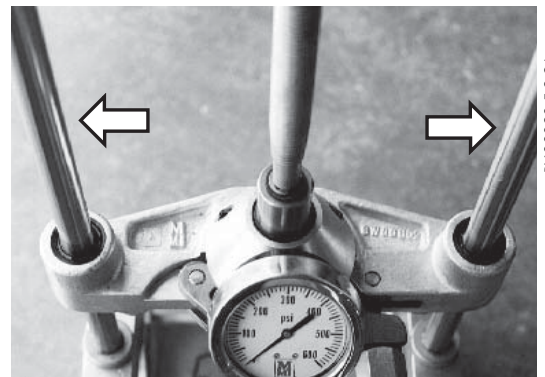


CD00178-5-3-96

## Clean Guide Rods

Remove accumulated dirt and grit from guide rods using WD-40® or similar solvent and wipe guide rods clean.

TX00910-9-22-10



PH00830-5-3-96

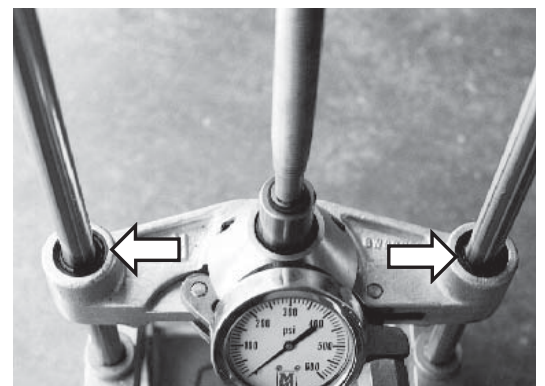
## Lubricate Wipers, Seals and Bearings

The rubber wipers and seals on the jaw require occasional light lubrication with 30W or lighter oil to keep them flexible and in good working order.

Remove guide rod support plate. Slide movable assembly up to expose linear ball bearings (Do not completely remove from the guide rods). Apply oil to the ball bearings.

Slide the movable jaw down and attach the guide rod support plate.

TX00911-9-22-10

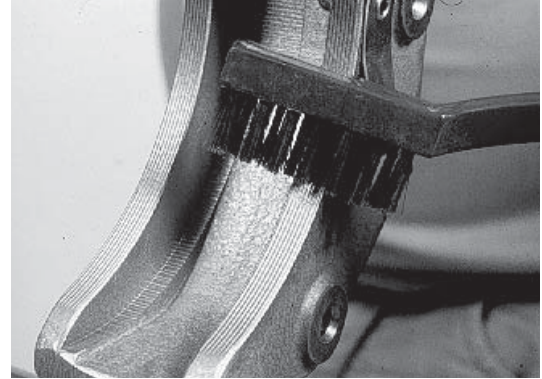


PH00830-5-3-96

# Maintenance

## Remove Dirt

Remove dirt from jaw and insert serrations, drive screw, and clamp knob eyebolts.

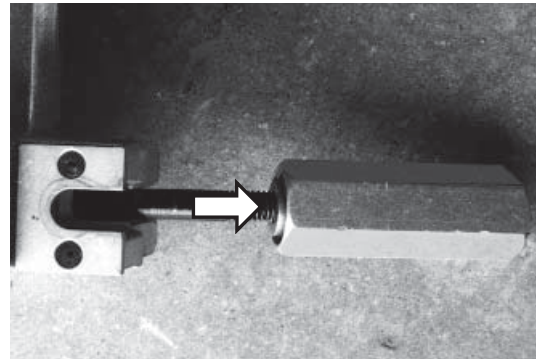


PH00724-2-21-96

TX00865-1-30-96

## Clean and Lubricate Bearings

All clamp knobs are equipped with thrust bearings to reduce friction and improve efficiency of the clamping screw. Wash the clamp knob bearing assembly with a solvent and then lubricate with a 30W or lighter oil.

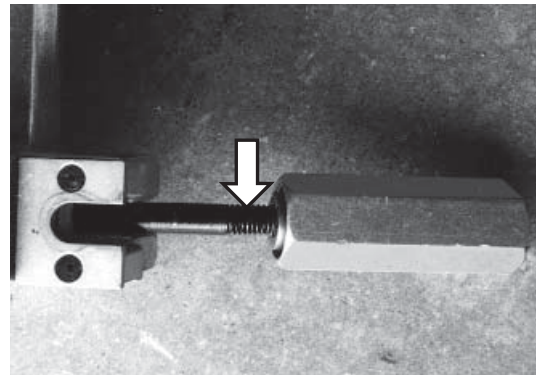


PH00833-5-6-96

TX00866-9-22-10

## Clean Eyebolt Threads

Keep the clamp knob eyebolt threads brushed clean.

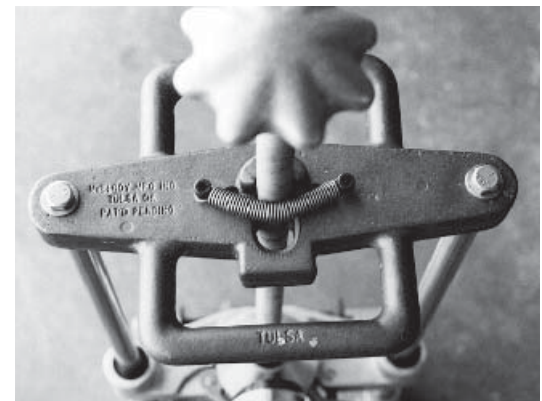


PH00833-5-6-96

TX00435-9-13-94

## Fasteners Must Be Tight

Check all nuts, bolts, and snap rings to make certain they are secure and in place.



PH00831-5-3-96

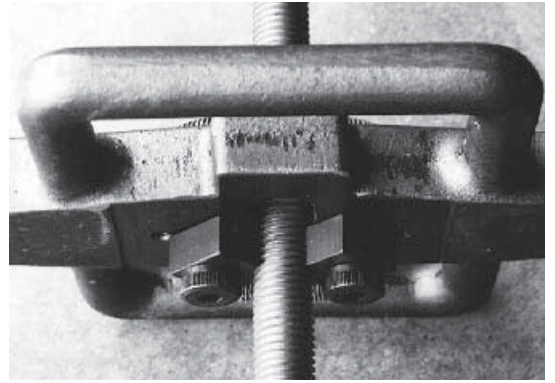
TX00437-9-13-94



# Maintenance

## Clean Split Nut

Spray the threaded surface of the split nut with WD-40® on a daily basis to maintain smooth action of the drive screw.

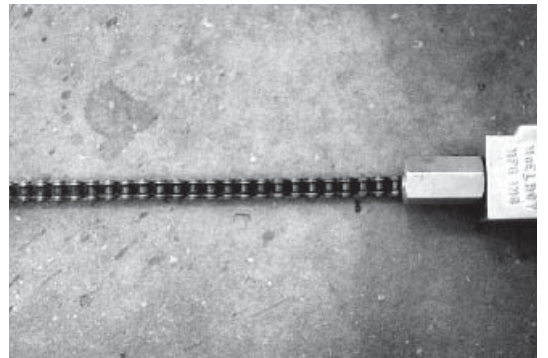


PH00834-5-6-96

TX00947-5-10-96

## Clean Chain

Clean the side fusion chain with a stiff bristled brush and oil generously. Wipe off excess oil.



PH00835-5-6-96

TX00948-5-10-96

# Maintenance

## Check the Hydraulic Fluid Level

You must remove the gauge in order to check the hydraulic fluid level.

If the hydraulic fluid level is too low, more force than necessary will be needed to operate the machine.

If the hydraulic fluid level is high, it will create some pressure on the gauge and it will not read zero.

To check the hydraulic fluid level or to replace Gauge:

First attach the Sidewinder to some 2-4" IPS Polyethylene pipe.

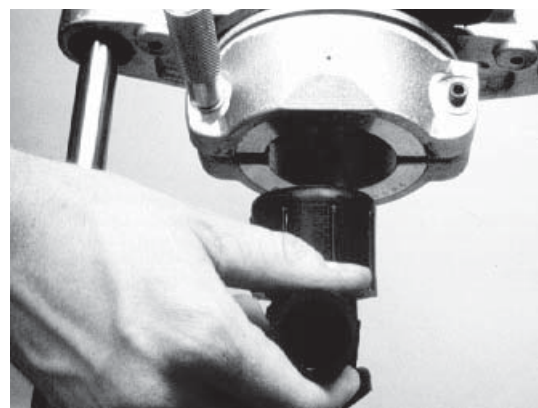
Load saddle fitting into pivot release master.

Loosen drive screw until piston is as far out of the load cell as it can go.

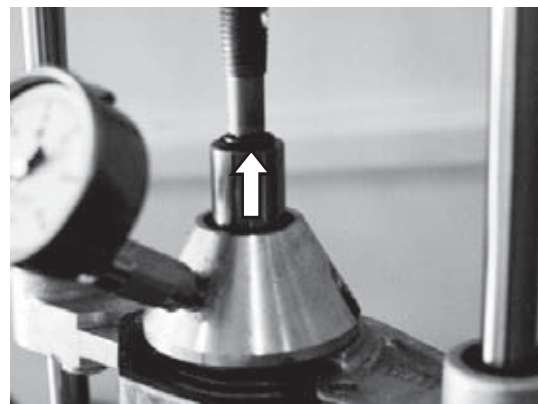
Tilt Sidewinder so that gauge port is facing upward.



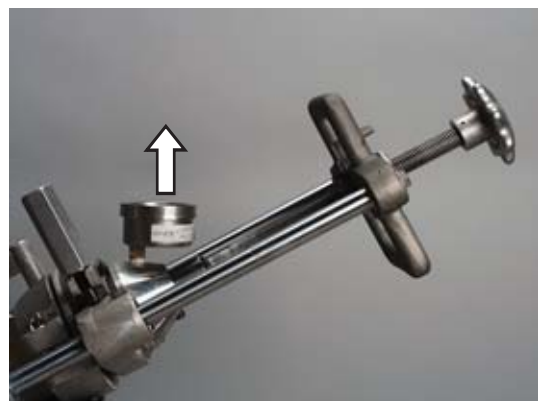
PH00783-5-9-96



PH0786-4-3-96



PH01113-3-14-97



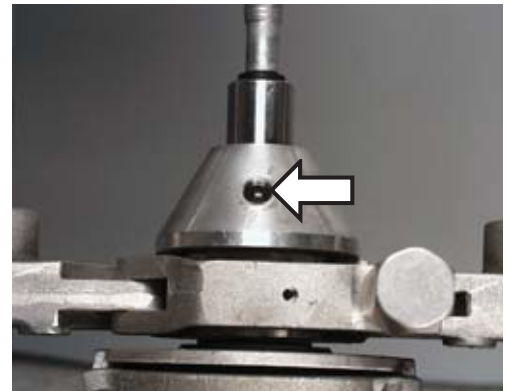
PH01522-3-19-99

# Maintenance

Use wrench to remove existing gauge.



Add or remove hydraulic fluid until the level is approximately 1/2" from the top of the port.



Reinstall gauge with Teflon tape applied to threads. Check to see if the needle indicates pressure as the gauge is being screwed on. If so, remove the gauge and use a clean rag to remove some hydraulic fluid. Repeat until no pressure is indicated while screwing gauge on.

**NOTICE:** When applying Teflon tape, make sure that the tape does not overhang the end of the pipe threads. The threads will cut off the tape and the small pieces will plug the orifice of the gauge.



# Maintenance

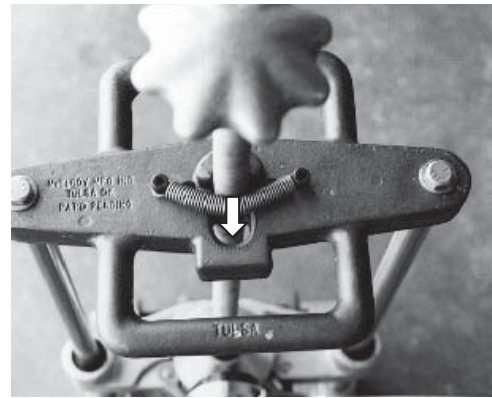
## Checking Installation

When the gauge is installed, return the Sidewinder to the vertical position.



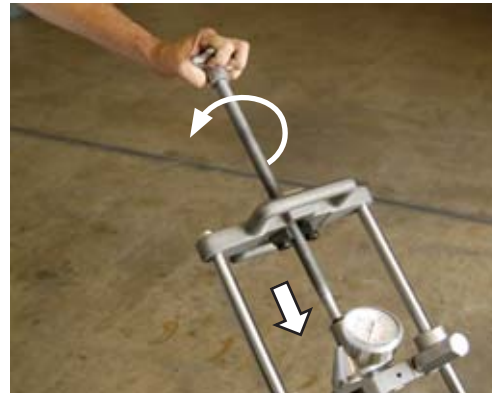
PH00783-5-9-96

Disengage drive screw from threads and lower the saddle fitting onto the pipe.



PH00831-5-3-96

Turn the drive screw to move the piston down.



PH03045-5-27-05

The gauge should indicate pressure within a half turn of the drive screw knob. If more than a half turn is made with the knob and no pressure is indicated, the gauge needs to be removed and more fluid added. Always tilt the Sidewinder back when adding fluid. Fluid needs to be added until pressure is indicated within the first half turn of the drive screw knob.

Check the gauge to ensure that it reads zero when no force is being applied with the drive screw. If the gauge does not read zero, the load cell may be overfilled or the gauge may be damaged. If the gauge indicates pressure when the piston is all the way out, then too much fluid was added and some needs to be removed.

**IMPORTANT:** If the gauge pointer is below the zero box area when no pressure is applied, use the external adjustment screw to move the pointer to the center of the box area as shown.

**NOTICE:** Applying excess pressure will permanently damage the gauge. Never apply pressure that is greater than the maximum indication on the pressure gauge.



PH03044-5-27-05

# Maintenance

## Dry Gauge Calibration

To calibrate the gauge you will need the following:

1. Pressure calibration equipment
2. Adjustable or open end wrench
3. Flat head screwdriver
4. Pliers

Attach gauge to pressure testing apparatus.

### Zero the Pointer

With no pressure applied, verify that the pointer is located inside the zero box area. If the pointer is not within the box, rotate the external adjustment screw pictured until the pointer is in the center of the box area as shown.

### Calibrating Gauge

Using pliers, pull the needle off the gauge, making sure to pull the needle straight out.

Pressurize calibration equipment to a major increment in the operating range of the Sidewinder. Place the needle on the gauge at the known increment, making sure the needle has snapped into place.

Example: For a Sidewinder with a 300 psi gauge using fittings that require 250 psi, pressurize calibration equipment to 250 and adjust the needle to 250 psi.

Replace bezel

**NOTICE:** Applying excess pressure will permanently damage the gauge. Never apply pressure that is greater than the maximum indication on the pressure gauge. The calibration procedure will not correct a damaged gauge.

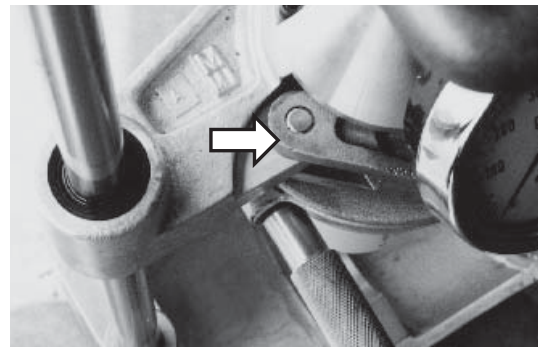
TX02498-6-15-10



PH03044-5-27-05

## Oil Jaw Pivot Pin

Occasionally, add a drop of light oil to the jaw pivot pin.



PH00837-5-6-96

TX00946-5-10-96

## Clean Heater Surfaces

The heater adapters must be kept clean and free of any plastic build-up or contamination.

Before each fusion is made, the surface of the heater adapters must be wiped with a clean, non-synthetic cloth.



PH02324-4-29-02

TX00867-6-15-10

# Maintenance

## Adjusting Heater Temperature

Turn knob to desired temperature. Measure the heater surface temperature with a pyrometer. Any variance must be corrected to the pyrometer reading.

Loosen setscrew in the knob. Turn knob to point to the same temperature as the pyrometer. Tighten setscrew in the knob.

Turn knob to desired temperature. Allow heater to stabilize at the new temperature (5 to 10 minutes) after adjusting.

The thermometer on the heater body indicates internal temperature and should be used as a reference only.



PH02314-4-29-02

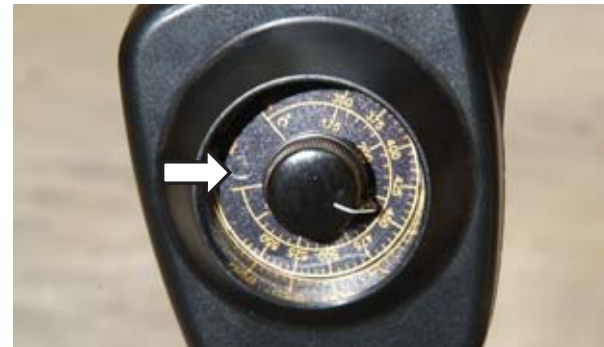
TX02009-3-13-02

## Heater Indicator Light

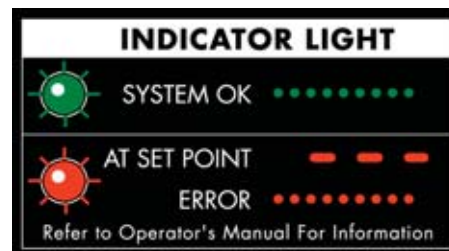
The heater has a green indicator light which will flash on and off. This indicates that the controller is operating normally. If the green indicator is not flashing then the controller may not be operating properly. If this occurs, disconnect power and have the heater repaired by an McElroy Authorized Service Center.

The heater has a red indicator light on the handle at the bottom of the temperature scale. When the heater is plugged in and preheating the red light glows steadily until the set temperature is reached. The red light then goes off and on as the heater maintains temperature.

If the heater is not operating properly, the control will attempt to turn the heater off and the red indicator light will flash rapidly. If this occurs, disconnect the power and take it to a McElroy Authorized Service Center for repair.



PH02314-4-29-02



PH02571-12-15-03

TX04036-4-12-10

# Maintenance Checklist

## Fusion Machine Checklist

Item to Check	Satisfactory	Needs Repair	Repair Comments
<b>UNIT</b>			
Machine is clean			
All pins and snaprings are in place			
All nuts and bolts are tight			
All placards and handles are in place			
All clamp knobs turn freely			
All hardware is on the basic machine			
Machine is free of leaks			
Hydraulic gauge reads correctly			
Jaws are properly aligned			
Inserts fit and pin properly			
Drive screw rotates freely			
System holds pressure			
Load cell contain proper amount of hydraulic fluid			
<b>HEATER</b>			
Cord and plug are in good condition			
Heater surface is clean and in good condition			
Thermometer is in good working order			
Surface temperature checked with pyrometer			

# Specifications

## Sidewinder

**Specification:** Designed for 4" and smaller branch saddles, tapping tees and smaller fittings

### Dimensions:

**Chain Clamp:** Width: 12.5" (318mm)  
Length: 12.5" (318mm)  
Height: 26.5" (673mm)  
Weight: 28 lbs (13Kg)

**Compact Chain Clamp:** Width: 12.5" (318mm)  
Depth: 12.5" (318mm)  
Height: 21.4" (546mm)  
Weight: 27 lbs (12Kg)

**Jaw Clamp:** Width: 10.5" (267mm)  
Length: 7.75" (203mm)  
Height: 28" (711mm)  
Weight: 26 lbs (11.7Kg)

**Compact Jaw Clamp:** Width: 10.5" (267mm)  
Depth: 7.75" (203mm)  
Height: 23" (584mm)  
Weight: 25 lbs (11Kg)

**Heaters:** 2", 800 W, 100-120 V, 50/60 Hz  
2", 800 W, 200-240 V, 50/60 Hz  
4", 1,200 W, 100-120 V, 50/60 Hz  
4", 1,200 W, 200-240 V, 50/60 Hz



## **About this manual . . .**

McElroy Manufacturing continually strives to give customers the best quality products available. This manual is printed with materials made for durable applications and harsh environments.

This manual is waterproof, tear resistant, grease resistant, abrasion resistant and the bonding quality of the printing ensures a readable, durable product.

The material does not contain any cellulose based materials and does not contribute to the harvesting of our forests, or ozone-depleting constituents. This manual can be safely disposed of in a landfill and will not leach into ground water.

TX001660-8-19-99



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