

**PWC
DET. PHILA.
CODE 500**

**Standard Operating
Procedure
FOR
Proper Use
Of
MA-10
Melter/Applicator**

Prepared By :

Frank Huser

Approved By :

Charles A. McHugh

Code 500

11-21-97

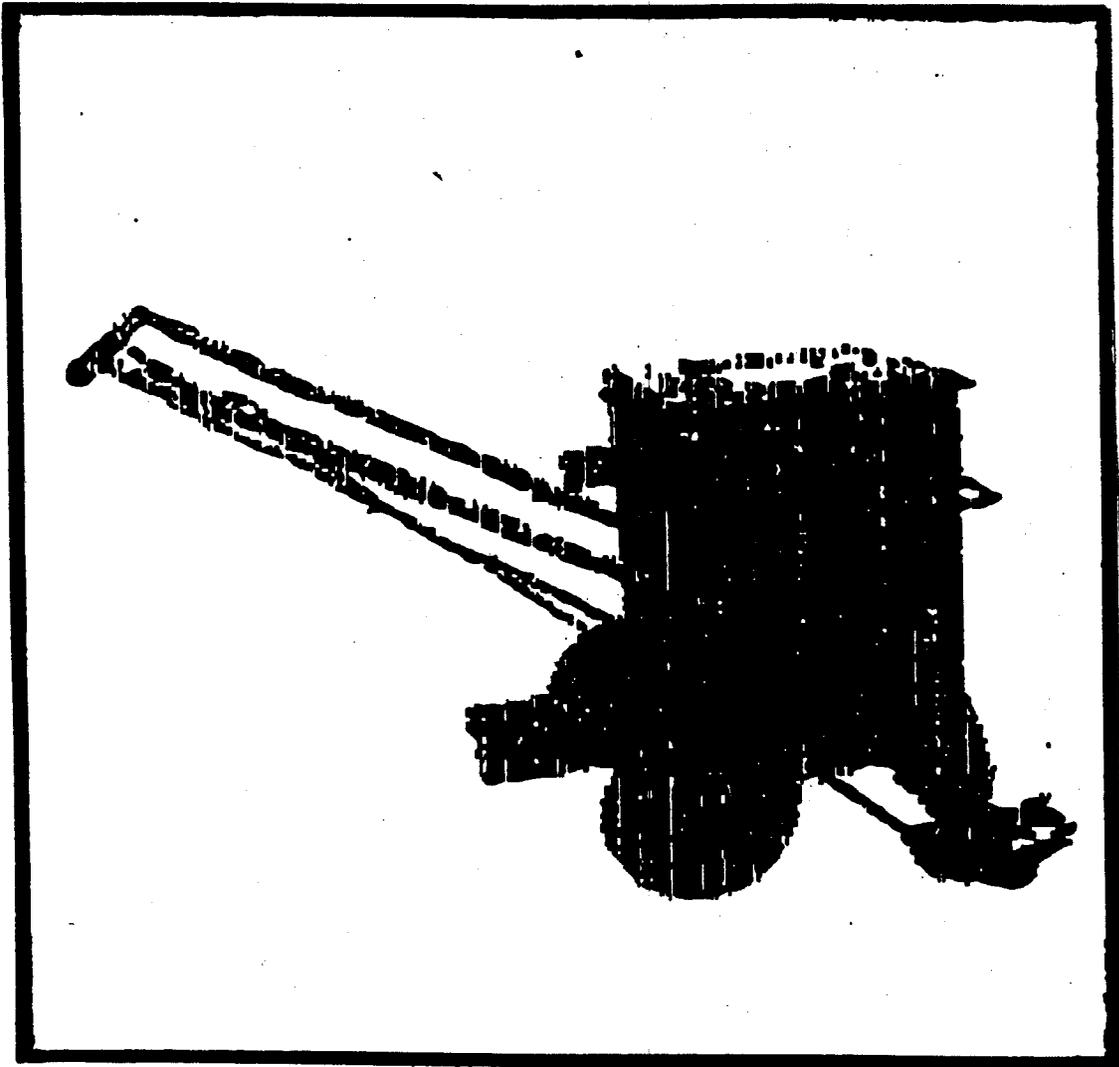
Date

Code 500 SOP # 12

**Standard Operating Procedure
Proper Use Of
MA-10 Melter/Applicator
Cracksealer**

1. The MA-10 Melter/Applicator is a propane fired Cracksealer, used for filling cracks in concrete and asphalt.
2. Operating instructions must be read and understood by all supervisors and their employees who will be operating this equipment.
3. **Material:**
 - A. Product # 9075- 9075H Flex- A- Fill is to be used with the MA-10 Melter/Applicator
4. **Attachments:**
 - A. Operating Instructions for MA-10 Melter/Applicator
 - B. Instruction Manuel for Gas Regulator used with propane tank.
 - C. Material Coverage Chart
 - D. Product Information Application Bulletin
 - E. Material Safety Data Sheet
5. **P. P. E.**
 - A. Hard Hat
 - B. Safety Glasses
 - C. Safety Shoes
 - D. Safety Goggles
 - E. Gloves
 - F. Respirator (when required)

MA-10 MELTER/APPLICATOR



SBR Systems, Inc.

4246 Dublin Road Columbus, OH 43221 Phone: 800-877-3369 Fax: 614-771-8849

FLEX KETTLE OPERATING INSTRUCTIONS

IMPORTANT

Safety precautions must be observed when using this equipment. Failure to follow instructions and to exercise reasonable care can result in damage or injury.

1. Position the kettle burner so it will be at least six feet from combustible material. Charge kettle with 50 to 100 pounds of Flex-A-Fill. Cardboard box must be removed. Plastic bag remains and will melt into heated Flex-A-Fill when stirred.
2. Light the LP torch as described in the torch operating instruction. **Always** remove torch from kettle before lighting.
3. Insert the torch in the Burner well without smothering the flame. **NOTE:** If the torch is inserted in the burner well when the flame is going full blast, it is likely to be smothered before it can start an up draft. If the Torch is smothered while in the burner well of the kettle, it is extremely important to allow any unburned gas in the kettle well to vent before reinserting the torch. If wind is a factor, locate the Flex Kettle so burner is operating down -wind. Shielding may also be necessary.
4. Make certain the torch is positioned properly in the center of the burner well. Remove any obstructions.
5. After waiting a moment allowing the circulation of air to start around the pan, the regulating valve can be adjusted as needed.
6. The Flex Kettle is designed to draw off liquid for use as soon as pouring temperature is reached. In heating, remember that heat penetrates the block of Flex-A-Fill slowly. Waiting for blocks to completely melt is inefficient and time consuming. For best results and fastest melting rate, Flex-A-Fill should be used as it liquefies. When operating at high flame, stir the material frequently as it heats. Extended heating of Flex-A-Fill over 400 degrees F. will destroy elastomeric polymers.
7. Stir material prior to drawing off. Stirring will increase melting rate and keep any unmelted portion of polybag away from draw off valve.
8. "Flashing" can be completely prevented by not allowing the material to exceed 400 degrees F. If the material does become too hot, remove the torch. For normal operation, half the normal flame on the torch gives sufficient heat. If flashing occurs, close the cover. Never use water to extinguish a Flex Kettle fire. Always have an extinguisher available rated to combat oil fires.
9. It is not essential to drain the Flex Kettle at the end of the day. However, the less material left in the Flex Kettle, the easier start up will be the next use. **WARNING:** Never allow the torch to fire into an empty Flex Kettle.
10. If you cover the Flex Kettle vent holes while torch is in operation, you will stop the draft and smother the flame. Whenever the Flex Kettle is stored, it should be covered to prevent water from collecting in the pan.

SBR Systems, Inc. warrants only that this product conforms, at the time of delivery by SBR Systems, to SBR Systems specification. All other warranties, expressed or implied, are excluded. AND WITHOUT LIMITATION ON THE FOREGOING, ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PURPOSE ARE EXCLUDED. Remedies against SBR Systems for breach of this exclusive warranty or any other defect or deficiency in this product, regardless of the theory of claim or action, is limited to replacing nonconforming product at SBR Systems expense or, at SBR Systems election, refund of full purchase price for nonconforming product purchased from SBR Systems. All claims for breach of this exclusive warranty or defective product must be made within one month of date of delivery. WITHOUT LIMITATION ON THE FOREGOING, ALL SPECIAL, CONSEQUENTIAL AND INCIDENTAL DAMAGES, INCLUDING THOSE FOR LOST PROFITS, ARE HEREBY EXCLUDED. These limited warranty and remedy provisions may not be modified or amended except in writing executed by an officer of SBR Systems, Inc.

Series 64 & 67 LP-Gas Regulators

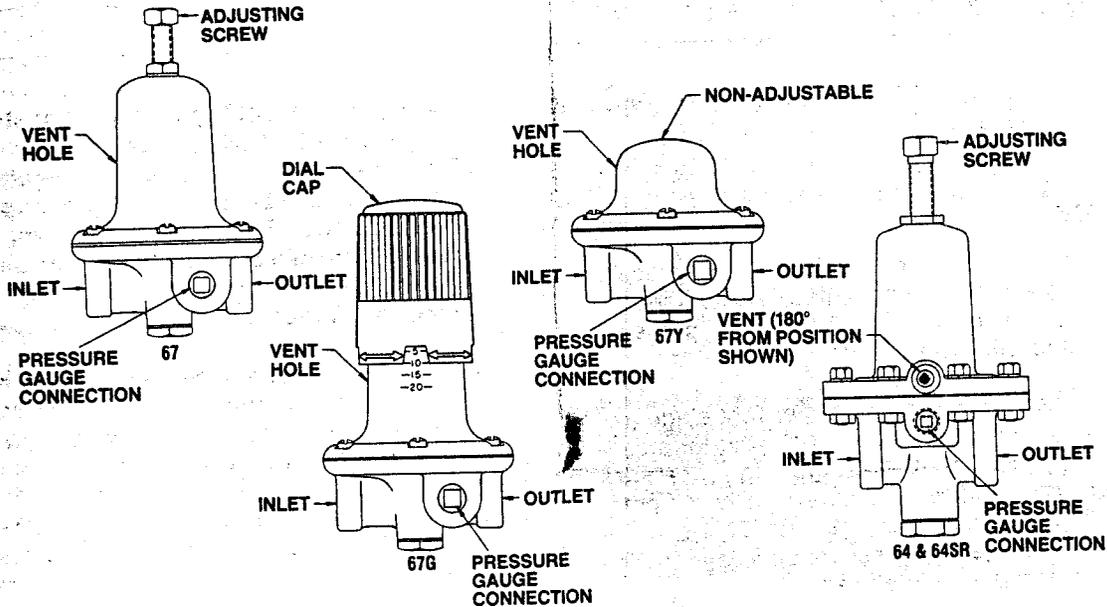


Figure 1. Series 64 and 67

WARNING

Fisher equipment must be installed, operated, and maintained in accordance with federal, state, and local codes and Fisher instructions. The installation in most states must also comply with NFPA No. 54 and 58 standards.

Only personnel trained in the proper procedures, codes, standards, and regulations of the LP-gas industry should install and service this equipment. Failure to follow these instructions or to properly install and maintain this equipment could result in an explosion and/or fire causing property damage and personal injury or death.

Things To Tell The Gas Customer:

1. Point out the regulator's vent (or vent assembly) to the customer and stress that this opening must remain

unobstructed at all times. Tell the customer to be sure to check the vent opening after a freezing rain, sleet storm, or snow to make sure ice has not formed in the vent.

2. Show the customer the shutoff valve on the container. The customer should close this valve immediately if gas can be smelled, appliance pilot lights fail to stay on or appear higher than usual, or any other abnormal situation occurs.

3. Tell the customer to call your company to service the regulator. If the regulator vents gas or a leak develops in the system, only a qualified gas serviceman should install or service the regulator.

Introduction

Scope of Manual

This instruction manual covers installation and maintenance.

Table 1. Specifications

Type Number	Inlet & Outlet Connections	Vent Opening	Adjustment	Outlet Adjustment Range	Internal Relief Valve	Max. Vapor Capacity BTU/Hr Propane ⁽¹⁾
64	1/2-inch FNPT	1/4-inch FNPT	Wrench	3-100 psig (4 springs)	No	5,250,000
64SR	1/2-inch FNPT	1/4-inch FNPT	Wrench	3-35 psig (3 springs)	Yes	3,600,000
67	1/4-inch FNPT	Hole in spring case	Wrench or handwheel	3-100 psig (4 springs)	No	1,150,000
67G	1/4-inch FNPT	Hole in spring case	Dial Cap	5-100 psig (3 springs)	No	1,150,000
67Y	1/4-inch FNPT	Hole in spring case	Nonadjustable	10, 15, or 20 psig	No	700,000

1. Based on inlet pressure 20 psig greater than outlet with 20% droop. Liquid capacity 160 gph for 64 Series; 3-5 gph for 67 Series.

nance for the following high pressure regulators: Types 64, 64SR, 67, 67G, and 67Y.

Description

All of the regulators are designed for high pressure (pounds per square inch) service and can be used on either vapor or liquid service. Their outlet pressure ranges from 3 to 100 psig.

Types 64 and 64SR are used for either first-stage (reducing container pressure to around 10 psig for a second-stage regulator) or final-stage high pressure service (reducing container pressure to a lower pressure for a high pressure burner). The 67 Series is intended for final-stage high pressure applications. The regulators are normally painted red.

Specifications

Table 1 lists the specifications for the regulators. Contact the factory if the regulators are to be used on any service other than LP-gas, natural gas, or air. Temperature limits are -20° to 150° F and maximum inlet pressure is 250 psig.

Installation

WARNING

All vents should be kept open to permit free flow of air into and out of the regulator. Protect openings against the entrance of rain, snow, ice formation, paint, mud, insects, or any other foreign material that could plug the vent or the vent line.

LP-gas may discharge to the atmosphere

through the vent of Type 64SR. An obstructed vent which limits air or gas flow can interfere with proper pressure regulation and could result in personal injury or property damage. Failure to use a vent line where there can be a hazardous accumulation of gas could result in personal injury or property damage.

Never use a first-stage (pounds to pounds) regulator on low pressure (inches of water column) service because personal injury or property damage could occur.

Before installing the regulator, check for damage which might have occurred in shipment. Also check for and remove any dirt or foreign matter which may have accumulated in the regulator body or the pipeline. Apply pipe compound to the male threads of the pipe.

Make sure gas flow through the regulator is in the correct direction—"Inlet" and "Outlet" connections are clearly marked on the regulator. The installation should be adequately protected from vehicular traffic and damage from other external sources.

If possible, install the regulator with the vent pointed down to allow condensate to drain. A hood or enclosure must be used to protect the regulator's vent opening from the elements on outdoor installations. An auxiliary vent assembly, such as the Fisher Y602 Series, could also be used for vent protection on Type 64 and 64SR.

Install the regulator high enough above ground level—at least 18-inches—so that rain splatter cannot freeze in the vent. Do not install the regulator in a location where there can be excessive water accumulation or ice formation, such as directly beneath a downspout, gutter, or roof line of a building.

Type 64 Series regulators installed indoors are limited to 20 psig maximum inlet pressure. A vent line to the

outside of the building is required for the Type 64SR. A vent assembly, such as Fisher Y602 Series, should be used on the end of the vent line. The same installation precautions apply to vent assemblies as the integral regulator vents covered previously. To install the vent line, remove the vent screen and apply a good grade of pipe dope to the male threads of the line. Vent piping or tubing must not restrict the flow passage of the 64SR's internal relief valve. Type 67 Series regulators should not be used on indoor installations.

Installation with shutoff valves ahead of the Type 64SR is recommended on liquid service, see figure 2. Installations with shutoffs downstream of the 64SR can trap liquid between the regulator and the shutoff. The trapped liquid can vaporize, opening the regulator's internal relief valve and exhausting gas through the vent. On installations where it is impossible to install the 64SR without using shutoffs between the regulator and the burner, either install the regulator in a safe location or run a line from the regulator vent to a safe location so that any discharge through the relief valve will not create a hazard.

Adjustment

The outlet pressure of all the regulators except Type 67Y can be adjusted. If it becomes necessary to adjust the outlet pressure on Types 64, 64SR, or 67, loosen the locknut at the top of the spring case. Turn the adjusting screw or handwheel clockwise to increase or counterclockwise to decrease the outlet pressure setting. Tighten the locknut to maintain the adjustment setting.

On Type 67G regulators, move the dial cap until the arrow on the cap points to the desired outlet pressure setting stamped on the spring case.

Overpressure Protection

WARNING

Personal injury or system damage may result if these regulators are installed without appropriate overpressure protection. Maximum emergency outlet pressure for the 67 Series is 50 psig over the outlet pressure setting, or 100 psig, whichever is greater. Maximum emergency outlet pressure for the 64 Series is 220 psig. Outlet pressures greater than these above the setpoint may cause damage to regulator parts, leaks in the regulator, or personal injury due to bursting of pressure-containing parts or explosion of accumulated gas.

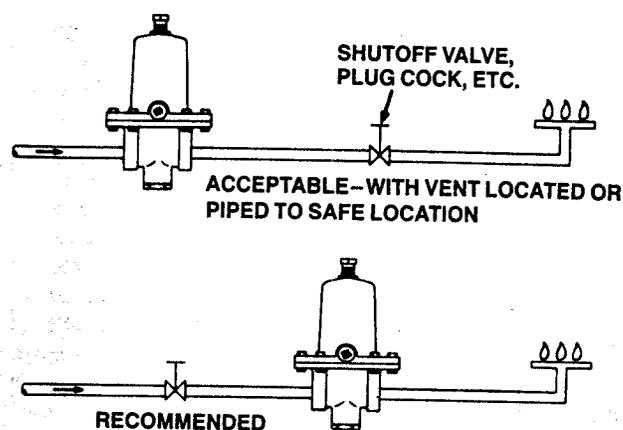


Figure 2. Type 64SR on Liquid Service Requires Care with Downstream Restrictions

If the regulator is exposed to an overpressure condition, it must be inspected for any damage that may have occurred.

Large volumes of gas may discharge through the Type 64SR vent during internal relief valve operation which can result in fire or explosion from accumulated gas.

A relief valve is required downstream of all the regulators (except Type 64SR) used on final-stage service. Type 64SR has an internal relief valve and does not require a separate relief valve downstream. The internal relief valve opens when downstream pressure reaches approximately 125% to 250% of the setpoint. When the internal relief valve opens, gas escapes through the 64SR's vent. The 64SR's internal relief valve gives overpressure protection against excessive build-up resulting from seat leakage due to worn parts or chips of foreign material on the orifice.

Maintenance

WARNING

To avoid personal injury or equipment damage, do not attempt any maintenance or disassembly without first isolating the regulator from system pressure and relieving all internal pressure.

Regulators that have been disassembled for repair must be tested for proper operation before being returned to service. Only parts manufactured by Fisher should be used for repairing Fisher regulators. Relight pilot lights according to normal startup procedures.

Due to normal wear or damage that may occur from external sources, these regulators must be inspected and maintained periodically. The frequency of inspection and replacement of the regulators depends upon the severity of service conditions or the requirements of local, state, and federal regulations. Even under ideal conditions, these regulators should be replaced after 15 years from the date of manufacture or sooner should inspection reveal the need.

Visually inspect the regulator each time a gas delivery is made for:

1. Improper installation.
2. Plugged or frozen vent.
3. Wrong regulator or no regulator in the system.
4. Internal or external corrosion.
5. Age of the regulator.
6. Any other condition that could cause the uncontrolled escape of gas.

Failure to do the above could result in personal injury or property damage.

Make sure the regulator vent, vent assembly, or vent line does not become plugged by mud, insects, ice, snow, paint, etc. The vent screen (Type 64 and 64SR only) aids in keeping the vent from becoming plugged,

and the screen should be clean and properly installed.

Replace any regulators that have had water in their spring case or show evidence of external or internal corrosion. Checking for internal corrosion requires complete removal of the spring case and shut down of the gas system. Closely examine regulators directly connected to the container valve by means of a solid POL adaptor (horizontal mounting) for signs of corrosion. Correct any improper installations.

Older regulators are more likely to catastrophically fail because of worn or corroded parts. Replace regulators over 15 years of age; other service or environmental conditions may dictate replacement of the regulator before it becomes 15 years old, refer to Fisher Bulletin LP-32.

Regulator Repair

Regulators that have been disassembled for repair must be tested for proper operation before being returned to service. Only parts manufactured by Fisher should be used for the repair of Fisher regulators. Be sure to give the complete type number of the regulator when corresponding with the factory.

While this information is presented in good faith and believed to be accurate, Fisher Controls does not guarantee satisfactory results from reliance upon such information. *Nothing contained herein is to be construed as a warranty or guarantee, express or implied, regarding the performance, merchantability, fitness*

or any other matter with respect to the products, nor as a recommendation to use any product or process in conflict with any patent. Fisher Controls reserves the right, without notice, to alter or improve the designs or specifications of the products described herein.

FISHER®

Fisher Controls

For further information, contact:

Fisher Controls

310 E. University Dr. (P.O. Box 8004), McKinney, Texas 75069, USA

Printed in USA

Equipment

Melting equipment can be cleaned with petroleum based solvents. Clean the melter according to manufacturer's recommendations. Caution should be taken that the solvent does not contaminate the sealant.

Storage

Boxes or pails can be stored outside as long as protective wrap is left intact. Sealant older than 3 years should be tested prior to use.

Safety Precautions

Koch Material Safety Data Sheet should be read by all personnel using the sealants prior to start up.

LIMITED WARRANTY

Koch Materials Company ("Koch") warrants only that this product conforms, at the time of delivery by Koch, to Koch's specification or a more demanding government specification applicable thereto. All other warranties, expressed or implied, are excluded, AND WITHOUT LIMITATION ON THE FOREGOING, ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PURPOSE ARE EXCLUDED. Remedies against Koch for breach of this exclusive warranty or any other defect or deficiency in this product, regardless of the theory of claim or action, is limited to replacing nonconforming product at Koch's expense or, at Koch's election, refund of the full purchase price for nonconforming product purchased from Koch. All claims for breach of this exclusive warranty or nonconforming or defective product must be made within three (3) months of date of use or twelve (12) months from date of delivery by Koch, whichever is later. WITHOUT LIMITATION ON THE FOREGOING, ALL SPECIAL, CONSEQUENTIAL AND INCIDENTAL DAMAGES, INCLUDING THOSE FOR LOST PROFITS, ARE HEREBY EXCLUDED. These limited warranty and remedy provisions may not be modified or amended except in writing executed by an officer of Koch.

Manufactured By:

KOCH

KOCH MATERIALS COMPANY

12154413066 P.01

TO

FROM MUNICIPAL SUPPLY

01-23-1997 09:44AM

Joint or Crack Preparation

On old concrete construction, all of the old joint sealant and dirt must be removed by plowing, sawing or other means that is satisfactory to clean the joint. On asphalt concrete the crack must be cleaned by routing, blowing, plowing, heat lancing or by some other means to satisfactorily clean the cracks. All joints or cracks must be free of moisture and thoroughly cleaned prior to sealing.

Melting and Application Equipment

The recommended melter shall be of the double boiler type but a direct bottom fired melter can be used. Either melter must have thermometers to control sealant temperature within recommended range. The sealant must be agitated during the melting process. Product 9075, Flex-A-Fill®, can be poured from melter or applied by a standard pour pot.

Installation of Sealant

At the time of placement of the sealant, the pavement and air temperatures should be above freezing. Joints and cracks should be filled full and tight squeegeeing may be desirable. It may be necessary to use a heat lance to remove moisture and dirt from joints and cracks prior to installation.

Packaging

Product 9075, Flex-A-Fill®, is packaged in 50 pound boxes, which contain 2-25 pound bags of sealant.

Coverage 1/2" x 1/2" Joint Size

Weight per gallon 9.4 Lbs.

Sealant required for 100 lineal feet 13.0 Lbs.

The information and data contained herein are based on information we believe to be accurate. Due to variable conditions and/or application equipment, we assume no responsibility for the use of this information. Koch shall not be responsible if the product or information should be used in a manner to infringe any patent or copyright.

Manufactured By:

KKOCH

KOCH MATERIALS COMPANY

Rev. 10/91V

PS-3755

12154413066 P.02

TO

MUNICIPAL SUPPLY

FROM

01-23-1997 09:44AM