



A DIVISION OF GETZ FIRE EQUIPMENT

**GETZ EQUIPMENT INNOVATORS**

**PART NO.: 4G0010**

**MODEL: AP CTP 1**

**CO2 TRANSFER PUMP**

(Revised 8/25/04)



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Telephone: 888-747-4389 Fax: 309-495-0625  
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## Limited Warranty

Products manufactured by Getz Equipment Innovators (with exception of electrical products or components) will be free from defects for a period of one year from shipment date. Electrical products and/or components used in manufactured products will have a (6) month warranty from shipment date. During the warranty period, customers who experience any manufacture-related service issues with our products, the product may be returned for repair or replacement. Customer must contact Getz Equipment for approval prior to any product return. Notwithstanding the foregoing, the limited warranty set forth shall be immediately void of customer uses any replacement parts other than those provided by Getz Equipment Innovators. The warranty does not cover normal wear and tear items, defects resulting from modification, alteration, misuse, exposure to corrosive conditions, extremely high temperatures, improper installation or maintenance. Warranties on component items not manufactured by Getz Equipment Innovators are provided by others whose warranty, evaluation and judgment will be final.

All implied warranties, including, but not limited to, warranties of fitness for purpose and merchantability, are limited to the time periods as stated above. In no event shall Getz Equipment Innovators be liable to incidental or consequential damages. Some states do not allow limitations on how long an implied warranty lasts or the exclusions or limitation of incidental or consequential damages, so that the above limitations or exclusions may not apply to you. Getz Equipment Innovators neither assumes nor authorizes any representative or other person to assume for it any obligation or liability other than as expressly set forth herein.

### **Mobile Service Vehicles:**

The warranty does not cover:

- Defects in the chassis and or power unit
- Defects in separately manufactured products not produced by Getz Equipment Innovators
- Deterioration due to normal wear, tear, and exposure
- Repairs made necessary by negligent use, misuse, abuse, loading the service vehicle beyond its gross vehicle weight limitations, accident, acts of God, or other contingencies beyond the control of Getz Equipment Innovators.
- Repairs deemed necessary by reason of the failure to follow ordinary maintenance procedures.
- Repairs deemed necessary by reason of alterations done without Getz Equipment Innovators' written approval.

Warranty Service:

- All warranty repairs will be performed by Getz Equipment Innovators in Pekin, IL, unless otherwise authorized by Getz Equipment Innovators.

Freight:

- Getz Equipment Innovators will not be liable for shipping or transportation charges to or from customer's location.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. To obtain performance to the obligation of the warranty, write to Getz Equipment Innovators, 2320 Lakecrest Drive, Pekin IL 61554, USA for instructions.

**PART #4G0010**

**CO2 TRANSFER PUMP**

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## OPERATING REQUIREMENTS

### MOTIVE POWER SOURCE

1. DRY NITROGEN - NITROGEN CYLINDER WITH A PRESSURE REGULATOR
2. DRY AIR - AIR CYLINDER WITH A PRESSURE REGULATOR
3. COMPRESSED AIR - AIR COMPRESSOR WITH A PRESSURE REGULATOR & MOISTURE TRAP

### AIR REQUIREMENTS

1. 130 P.S.I. AT 13 CUBIC FEET PER MINUTE
2. MAXIMUM AIR PRESSURE TO CO2 PUMP - 150 P.S.I.
3. SAFETY RELIEF SET AT 150 P.S.I. - "AUTOMATIC RESETTING TYPE"

### USABLE MEDIA IN THE CO2 PUMP

1. LIQUID CO2 - SIPHON TUBE IN SUPPLY VALVE
2. HIGH PRESSURE CO2 LIQUID CYLINDER

### SAFETY REQUIREMENTS

1. SAFETY GLASSES
2. LOW TEMPERATURE GLOVES

## **OPERATING & SET-UP INSTRUCTIONS**

"REFER TO DRAWING SCHEMATIC #4G0010"

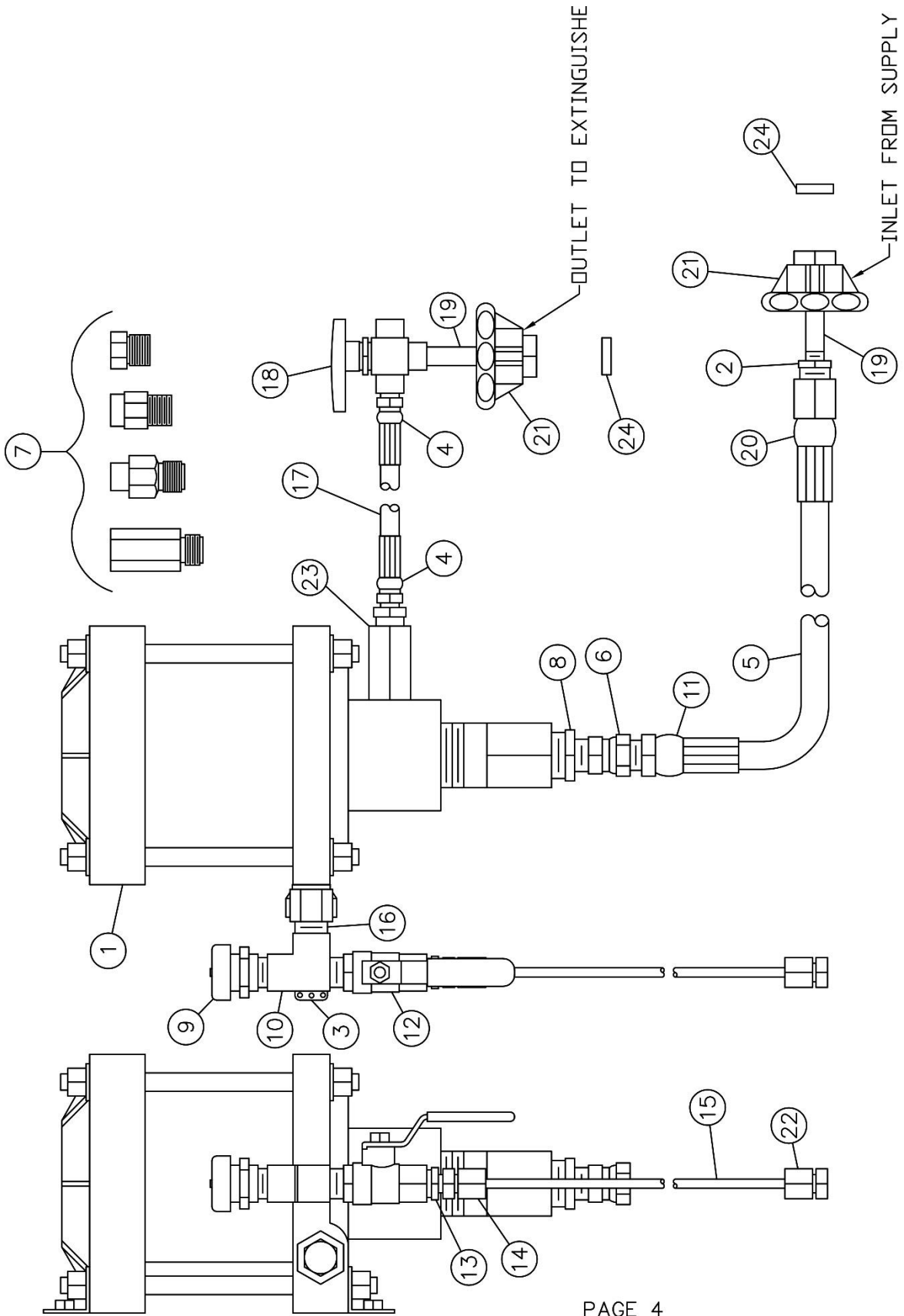
- A. Mount the CO2 pump (#1) to a wall or bench as close to the air supply line & liquid CO2 supply cylinder as possible.
- B. Insert one end of the 3/8" clear air line (#15) into the 3/8" tube connector (#14) on the CO2 pump (#1) and tighten securely.
- C. Uncoil the 3/8" clear air line (#15) and connect the 1/4" X 3/8" tube connector (#22) already connected to the 3/8" clear air line (#15) into a regulated air source and tighten securely. "Air pressure regulator must be set to zero".
- D. Close the 1/2" brass ball valve (#12) on the CO2 pump so that the handle is facing sideways to the valve body.
- E. Adjust the air supply regulator to 140 PSI on the outlet pressure gauge. "Check for air leaks".
- F. Connect the hose fitting (#11) on the 1/2" synflex line (#5) into the female 1/2" swivel (#6) on the bottom of the CO2 pump and tighten securely.
- G. Thread hose fitting (#4) on the 1/4" synflex line (#17) into the female outlet check (#23) on the side of the CO2 pump.
- H. Place the gripwheel (#21) up to the liquid CO2 cylinder valve and swivel the gripwheel (#21) clockwise until securely tightened.
- I. Turn the handle on the 1/4" brass 3-way valve (#18) until the handle is facing sideways to the valve body. Open the CO2 liquid supply valve on the CO2 liquid supply cylinder and check for leaks.
- J. While securely holding the 1/4" brass 3 way valve (#18), turn the valve handle to point toward the 1/4" synflex line (#17) and allow the air to bleed out of the pump & hoses until CO2 begins to flow out of the brass stem (#19). Turn the valve handle back to point sideways to the valve body.
- K. Remove the hose or horn from the CO2 extinguisher and thread one of the four CO2 fill adapters (#7) onto the CO2 extinguisher valve. Swivel the gripwheel (#21) on valve (#18) clockwise onto the CO2 fill adapter on the CO2 extinguisher valve. "Tighten securely"
- L. Place the CO2 extinguisher onto a scale and clamp open the extinguisher valve.
- M. Record the weight shown on the scale or adjust the scale weights to get the correct empty weight of extinguisher. Look on the extinguisher to be filled to determine the amount of CO2 liquid the extinguisher will need. Add the empty weight of the extinguisher and the amount of CO2 liquid the extinguisher will need and adjust the scale to show the total amount of weight needed.
- N. Turn the valve handle on valve (#18) to point toward the 1/4" synflex line (#17) and CO2 liquid will flow into the CO2 cylinder. When the scale stop increasing in weight of no CO2 liquid is heard flowing through the 1/4" synflex line (#17), turn the valve handle in line with the 1/2" brass ball valve (#12) to start the CO@ pump pumping.

## **OPERATING & SET-UP INSTRUCTIONS**

**(CONTINUED)**

- O. When the total weight is achieved on the scale, turn the valve handle sideways to the valve body on the 1/2" brass ball valve (#12).
- P. Unlock the extinguisher valve and turn the valve handle on the 1/4" brass 3-way ball valve (#18) to point toward the open port of the valve to release the CO2 pressure on the gripwheel (#21).
- Q. Place the safety pin in the extinguisher valve handle and restrain the pin to the valve with a plastic seal.
- R. Turn the valve handle on the 1/4" 3-way ball valve (#18) sideways to the valve body and turn the gripwheel (#21) counter-clockwise to remove the gripwheel from CO2 fill adapter (#7).
- S. Remove the CO2 fill adapter (#7) from the CO2 extinguisher valve and replace the hose or horn assembly.

If you are finished for an extended period of time, turn off the CO2 supply cylinder and air supply to the pump. Also, bleed the liquid CO2 out of the CO2 pump and lines.



## PARTS LIST

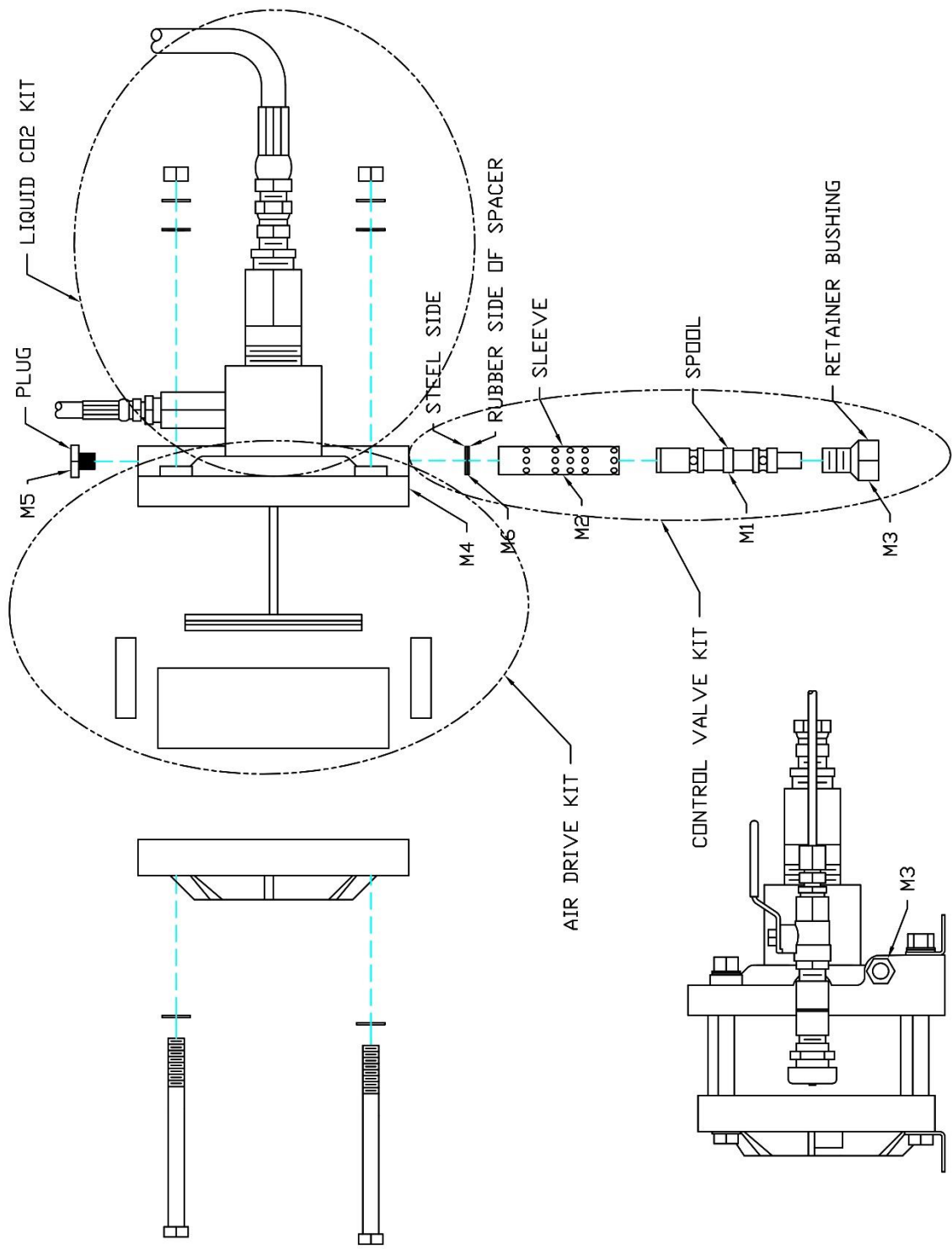
<u>ITEM #</u>	<u>PART #</u>	<u>DESCRIPTION</u>
1	51739	PUMP CO2 TRANSFER
2	51679	PIPE RDCR 1/2 X 1/4 6000 BK
3	51575	MUFFLER ARROW
4	51256	CPLG 1/4 ML SYNDFLEX
5	51562	MTL SYNDFLEX 1/2 2000PSI
6	51864	SWIVEL MECH 1/2 (9205)
7	58509	AD SET CO2 (4 PAK)
8	51678	PIPE RDCR 1 X 1/2 6000 BK
9	51929	VLV POPOFF 1/2 150PSI
10	51694	PIPE TEE BR 1/2 ST
11	51253	CPLG 1/2 ML SYNDFLEX
12	51896	VLV BALL BR 1/2 X 1/2 FMLE
13	51684	PIPE RDCR BR 1/2 X 1/4
14	51240	CONN PLAS 1/4" ML X 3/8 TUBE
15	51554	MTL NYCOIL 3/8 WH
16	51647	PIPE NIP BR 1/2 X CLOSE
17	51564	MTL SYNDFLEX 1/4 2750PSI
18	51897	VLV BALL 1/4 3WAY WHTY
19	52578	STEM CO2 w/ PLASTIC SEAL
20	51252	CPLG 1/2 FMLE SYNDFLEX
21	52577	NUT CO2 w/ HAND TIGHT WHEEL
22	51240	CONN PLAS 1/4 ML X 3/8 TUBE
23		OUTLET CHECK
24	52767	WASHER NYLON WESTERN STEM



REBUILD KITS/PARTS

***REFER TO DRAWING PAGE 7***

- |                         |           |
|-------------------------|-----------|
| 1. AIR DRIVE KIT        | P/N 51443 |
| 2. LIQUID CO2 KIT       | P/N 58570 |
| 3. NYLON STEM WASHER    | P/N 52767 |
| 4. CONTROL VALVE KIT    | P/N 51445 |
| 5. AIR SEAL LUBRICATION | P/N 51515 |



## LUBRICATION INSTRUCTIONS

**\*\*\* DO NOT USE AIRLINE OIL MIST LUBRICATOR \*\*\***

This unit has been properly lubricated during assembly. Do not use a line oil mist lubricator or standard O-ring lubrication.

Re-lubricate the spook valve (item 27) and outer sleeve (item 29) every three month with Getz part #51515 – air seal lubricant.

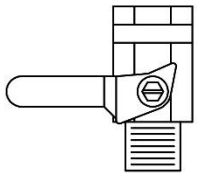
### LUBRICATING INSTRUCTIONS:

1. See page 7, pump schematic, to aid lubrication of the air drive.
2. Turn off the incoming air supply and bleed air pressure off of the CO2 pump.
3. Turn of the incoming CO2 liquid supply to the pump and bleed CO@ liquid out of the CO2 pump.
4. Unscrew the retainer bushing (#24) counter-clockwise from the lower end cap assembly (#11).
5. Unscrew the pipe plug (#14) counter0clockwise.
6. Insert a 1/4” wooden dowel rod into the hole where the pipe plug (#14) we removed and push the inner spool (#27) out of the lower end cap (#11), nothing the way the spool comes out.
7. Reinsert the 1/4” wooden dowel rod into the hole where the pipe plug (#14) was removed and push the outer sleeve (#29) out of the lower end cap (#11); noting the way the sleeve comes out.
8. If the space (#32) was not removed with the outer sleeve (#29), place the 1/4” wooden dowel rod into the hole where the pipe plug (#14) was removed and push the spacer out of the lower end cap (#11). Lightly lubricate the rubber part of the spacer with P/N 51515.
9. Apply al light coat of Getz part #51515 – air seal lubricant to the O-ring on the inner spool (#27) an outer sleeve (#29) O-rings.
10. Reinsert the space (#32) back into the lower end cap (#M4) with the metal portion of the spacer toward the pipe plug hole.
11. Reinsert the outer sleeve (#29) an inner spool (#27) back into the lower end cap (#11) and seat firmly into place.
12. Place pipe sealant on the pipe plug (#14) and screw clockwise back in the lower end cap (#11) securely.
13. Place a light coat of Getz part #51515 – air seal lubrication on the inner and outer O-ring on the retainer bushing (24) and screw the retainer bushing back into the lower end cap (#11). “Snug up gently”.
14. Turn on the incoming air supply and CO2 liquid supply to the CO2 pump.

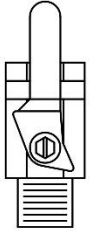
If the air drive section is disassembled, apply a very thin coat of Getz part #51515 to all of the O-ring surfaces in the air drive section before reassembling.

## **TROUBLE SHOOTING GUIDE**

1. Pump cycles but it will not add weight to the cylinder being filled:
  - A. No siphon tube on the CO2 supply valve in the CO2 liquid cylinder.
  - B. CO2 liquid cylinder is empty.
  - C. CO2 pump is vapor locked and will require CO2 liquid be purged through valve #18.
  
2. Pump stalls out before that total weight is in the cylinder being filled:
  - A. Increase the incoming air pressure to the CO2 pump up to 150 PSI.
  - B. Inner spool valve and outer sleeve need to be lubricated. See page #7.
  - C. Air drive section needs to be disassembled and lubricated. See page #7.
  
3. White mist or ice forms on the CO2 pump muffler:
  - A. Liquid seals in the CO2 pump need to be replaced. Part #53233 ref. page #7.
  - B. CO2 vapor is being used to power the CO2 pump.
  - C. Incoming air supply temperature is above 140 degrees Fahrenheit.
  
4. Pump will not cycle or cycles slowly at proper incoming air pressure and the spool valve and outer sleeve have been lubed:
  - A. O-ring needs to be replaced on the spool valve and outer sleeve. Part # 53232 ref, page #7.
  - B. Incoming air supply regulator is dirty or has foreign material blocking the inlet port screen.
  - C. Liquid CO2 cylinder supply valve is not open or is not open all the way.
  
5. Pump stalls and blows air continuously out of the CO2 pump muffler:
  - A. O-ring seals need to be replaced in the air drive section. Part #53232 ref. page #7.
  - B. O-ring need to be lubricated on the inner spool valve (item #27), outer sleeve (item #29), and air drive section. ref. page #7.

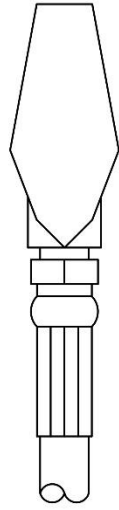


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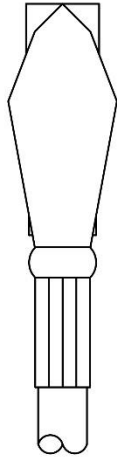


OPEN

FILL



VENT



OFF

