PROBLER P2 GUN TRAINING

MCC Equipment & Service Center
Your Sales, Service and Solutions Team

**BENEFITS**

- Designed for application of plural component materials
- Small, light weight
- Easy to use and maintain
- Low cost of operation
- Dual piston design = High force, fast reaction with small parts
- Two piece Mixing Chamber and Insert
- Filtration of A and B Material Side Blocks
GUN KEY FEATURES

- Patented Two-piece Mixing Chamber
- Patented Powerful Dual Piston
- Ergonomic Handle design featuring one of the lightest weight Guns on the market
- Side Blocks house Fillers, Check Valves and Side Block Seats

GUN BASICS

- On / Off Ball Valves
- Slide Air Valve
- Zork Lube Fitting
- Trigger Lock
- Removable Spray Tip
- Grip
- Removable ISO & POLY Side Blocks
**AIR CONNECTION & ON/OFF SLIDE VALVE**

- Controls air to gun for actuation and purge
- 90-120 PSI DRY, CLEAN AIR IS REQUIRED
- Dirty, wet air shortens service life of o-rings and seals
- Can blow dirt and moisture into substrate

**AIR SLIDE**

- ON slide forward, OFF pull back
- Clean and grease slide surface daily to keep operational
- Air inlet check ball and spring
  - Protects back handle and main air line from contamination
- Two separate air passages through the nose
  - Air port to handle, top side of check valve (Gun air)
  - Air port through to nose, bottom side of check valve (Purge air)
ON / OFF BALL VALVES

- Quarter turn valves to turn on material
- Valves should be in the off position except when spraying
- If material is weeping through closed ball valve
  - Remove Allen screw and pull handle off
  - Under handle is a 5/16 packing nut
  - Tighten 1/8 turn at a time till leaking stops
  - Over tightening will make it hard to turn on or off
ON / OFF BALL VALVES

ON

UNLOCK
- Push in and turn counter-clockwise, release and allow to spring out

LOCK
- Push in and turn clockwise
- Trigger should be locked at all time except when spraying

WHEN LOCKED
- Trigger will depress
- Chamber and air cap will not snap back
- Air purge will stay on constantly

WHEN UNLOCKED
- When triggered chamber and air cap will snap back
- Air purge will shut off

TRIGGER SAFETY LOCK

OFF
• UNLOCK
  • Push in and turn counter-clockwise, release and allow to spring out

• LOCK
  • Push in and turn clockwise
  • Trigger should be locked at all time except when spraying

• WHEN LOCKED
  • Trigger will depress
  • Chamber and air cap will not snap back
  • Air purge will stay on constantly

• WHEN UNLOCKED
  • When triggered chamber and air cap will snap back
  • Air purge will shut off

• Always be aware of safety precautions
  • Never look into gun
  • Don’t point gun at any body part or people
  • Keep fingers off of trigger
  • Turn off ball valves and lock trigger when not in use
**SHUT DOWN GREASE FITTING**

- Used to grease gun head at shut down
- Use high quality white lithium grease (Lubriplate)
- Prevents ISO product from scaling on parts
- Lubricates slide surfaces of chamber, seals, and broach

**AIR CAP**

- Cap is designed to hold insert and seal air with o-ring
- Snug with ½ inch wrench
  - To tight will damage components
  - To loose will allow product to leak
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MIXING CHAMBER & INSERT

- Mixing Chamber and Insert
**MIXING CHAMBER**

- Controls mix of product
- Side ports offset to create turbulence mix
- Counter bore in chamber allows side ports to connect
- Side port surfaces must clean and free of any scratches or pitting
- 1200 grit sand paper can be used to polish
- Chamber must be snug down to front piston
  - ¼ inch wrench on chamber and 7mm on front piston
  - Always have chamber with numbers pointing up

**INSERT**

- Controls output
- Round spray pattern
- Inner diameter of like sized insert is smaller than chamber counter bore
  - Creating back pressure for proper mix
  - Easy change out to renew spray pattern
Typically match like inserts with chamber
-01 chamber with -01 insert

It is acceptable to lower the insert size to chamber size
-01 chamber with -00 insert
-02 chamber with -00 insert

Rarely and not normally recommended to use bigger insert than chamber
-01 chamber with -02 insert
This can cause a poor mix and pattern
The chamber initiates the mix in the counter bore and the insert creates back pressure for proper mix and spray pattern

Always use the correct size drill bit specified for port
3 different drill bits are required for cleaning
-2 drill bits for mixing chamber
  Smallest bit for side ports
  **DRILL BIT DOES NOT GO ALL THE WAY THROUGH !!!**
  Largest bit for counter bore
-1 drill bit for insert
DISPENSE OPTIONS

23983-01
JET STREAM

23984-00
POUR

DISPENSE OPTIONS

70007-00
INJECTION PORT ADAPTER KIT
STAINLESS STEEL WHIP KIT

- Interchangeable between P2 and Fusion Guns
- Soft Seals
  - Prevent leaks during recirculation
  - Easy Maintenance
- Internal Check Valve design prevents bleed-out
- Back-up Ball Valves prevent leaks if debris becomes lodged in internal check valve
- Grease Fittings allow back flush of ports providing easy clean for less ISO mess

P2 / FUSION RECIRCULATION BLOCK
PARTS DIAGRAM

BASIC MAINTENANCE

- Before maintenance is performed
  - Turn ball valves off
  - Trigger gun 3-5 times purging material and relieving pressure off of side blocks
  - Turn air off
  - Disconnect or bleed off air to feed pumps in drums
  - Bleed off pressure at recirculation valves on machine
A & B SIDE BLOCKS

• Key components
  • 40 mesh filter: filters particles out that could plug side ports or spray tips
  • Service as P.M. requires
  • Clogged filter usually shows higher pressure on that side and the substrate is going to be rich with the other product
  • O-ring to seal off material
  • Check ball and spring: prevents damage to valves, hoses, etc. from great differential of pressure, typically caused upstream

A & B SIDE BLOCKS

• Side Block Seal Assembly
  • Black Delrin Seal
  • Seal Spring
  • Side Block Seal & O-Ring
  • Side Block Housing
**A & B SIDE BLOCKS**

- **Black Delrin Seal**
  - Seals material from leaking through housing threads
  - Can be damaged if over tightened
  - Choke up on wrench when tightening

**A & B SIDE BLOCKS**

- **Seal Spring**
  - Keeps side block seal pressed against mixing chamber
  - Spring sit down into Black Delrin Seal
A & B SIDE BLOCKS

Side Block Seal & O-Ring
- Set against mixing chamber
- Directs flow through to side port of chamber
- O-ring seals internal of housing bore
- Must be free floating in housing
- Scratches or pitting in surface will allow blow by
  - 1200 grit sand paper, flat block, and oil can be use to clean and polish

A & B SIDE BLOCKS

Side Block Seal Housing
- Houses side block seal
- Treads and inner bore need to be clean
  - Dirty bore will cause damage to o-ring
  - Shortens service life
  - Creates leaks resulting in blow by
- When assembled should be able to push in and spring back
A & B SIDE BLOCKS

- Side Blocks
  - Houses all of the previously mentioned parts
  - Clean
    - Threads
    - Ports
    - O-ring groves
      - Prevents fluid leaks
    - Clean and polish all mating surfaces
      - Prevents air leaks
**Gun Head Assembly**

- Air Slide Assy., Mixing Chamber and Air Cap, Side Blocks

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**Cleaning**

- All matting surfaces should be cleaned and polished
- Inter bore should allow mixing chamber to slide through freely
  - Apply a coat of lithium grease after cleaning
The back handle will only require service after considerable time in the field.

- It’s life is dictated by…
  - Air quality
  - Proper start-up and shut-down
  - Service to the head, preventing possible crossover
  - General handling of the gun

Contains three O-Rings
- Inspect and lubricate well with white lithium grease
  - If air leaks from bottom of handle it is most likely there is a damaged or worn o-ring
- Clean bore with nylon brush
- Spring will return spool when trigger is released
- Retaining nut should have threads flush with back of gun
MAIN PISTON

- Breakdown Procedure
- Remove rear cap
- Use 3/8” nut driver or socket
- Hold front piston with 7mm wrench
- Turn out counter-clockwise
- Pull rear piston out
- Remove static piston e-clip with snap ring pliers
- Remove center piston while pushing front piston through
- Clean and inspect all pistons, shafts, and inner bores

MAIN PISTON

- Assembly
- Lubricate O-rings liberally with white lithium grease
- Re-install front piston
- Re-install static piston, use 3/8 deep well socket
- Install straight and square, push until hearing a “snap”, inspect for chipped O-ring
  - If O-ring is chipped during rebuild, air will leak out of bottom of handle
- Place e-clip back in groove to hold static piston in place
- Place purple Loctite on threads of rear piston and re-stall
- Hold front piston with 7mm and tighten rear piston with 3/8” driver “Snug”
- Re-install rear cap
HANDLE

- Air Passages
  - Blue: Line air
  - Aqua: Gun air on
  - Red: Gun air off
  - Green: Exhaust ports

CHECK ALIGNMENT

- In the rare case of needing to check the gun alignment, proceed as follows...
  - Remove side blocks
  - Air on, trigger gun, chamber will snap back
  - Turn air off, release trigger
  - Note position of chamber side port
CHECK ALIGNMENT

- Insert side block seal assembly into side port of nose
- Note alignment
- Just forward of center

CHECK ALIGNMENT

- Use a 9/16” wrench to adjust back travel
  - Clockwise will limit back travel
  - Counterclockwise will allow further back travel
CHECK ALIGNMENT

- Remove Seal assy.
- Air on, snap gun
- Air off, release trigger
- Reinsert seal assembly to verify correct alignment

Apply Purple Lock-tite to exposed threads of adjustment nut
- Return gun to service
START-UP PROCEDURES

Step 1  Air On
• Push air slide forward to purge grease out of snout
• Turn air off

Step 2
• Clean counter bore with correct Drill bit per Chamber
START-UP PROCEDURES

Step 3a Install Insert
• Using correct drill bit clean out insert
• Clean air cap and grease o-ring

START-UP PROCEDURES

Step 3b Install Insert
• Using correct drill bit clean out insert
• Clean air cap and grease o-ring
• Install insert and air cap use ½ inch wrench to tighten
START-UP PROCEDURES

Step 4  Turn Off Safety Lock
• Turn air on
• Push in trigger lock and turn counterclockwise, release and allow to spring out
• Trigger gun 2-3 times to purge out grease
• Gun is triggered air cap should retract and air purge is OFF
• Gun trigger is released air cap forward and air purge ON

START-UP PROCEDURES

Step 5a  Turn On Material
• One at a time turn ball valves ¼ turn
• Observe for material “blow by”
• If not observed, continue
• If material blows out tip, turn valves off and fix issue
START-UP PROCEDURES

Step 5b  Turn On Material
- One at a time turn ball valves ¼ turn
- Observe for material “blow by”
- If not observed, continue
- If material blows out tip, turn valves off and fix issue

START-UP PROCEDURES

Step 6  Practice Spray
- Point at a safe purge area (bucket, cardboard)
- Pull trigger and observe spray pattern
- Start out as a stream
  - w/in 1-2 seconds, will fan out
  - Observe gauges should be equal and steady
- Feel the hoses for steady pump flow
- See the consistency of spray pattern
START-UP PROCEDURES

Step 7  Ready To Spray
• Always use safety precautions
  • Never point gun persons
  • Don’t put hand in front of gun
  • When setting gun down
    • Turn valves off
    • Trigger gun 3-5 times purging material and relieving pressure
    • Lock trigger

SHUT-DOWN PROCEDURES

Step 1  Turn Material Off
• Turn both ball valves to the off position
• Trigger gun 3-5 times relieving pressure and helping purge out mixing chamber
SHUT-DOWN PROCEDURES

Step 2  Lock Trigger
• Push in and turn clockwise to lock gun

Step 3  Minimize Air Flow
• Pull air slide back half way minimizing air flow
**SHUT-DOWN PROCEDURES**

**Step 4  Add White Lithium**
- Attach grease gun to zerk fitting
- Pump with grease 3-4 times or until light mist is observed coming out of tip

**SHUT-DOWN PROCEDURES**

**Step 5  Turn Air Off**
- Pull air slide all the way back to the off position
SHUT-DOWN PROCEDURES

Step 6  Remove Air Cap
- Using ½ inch wrench remove air cap
- Pull out insert place in solvent
- If air cap needs soaked remove o-ring
Step 7  Backfilling Mixing Chamber

- Take grease gun to the snout of mixing chamber
- 1-2 pump to backfill Chamber
- Fill in around mixing chamber creating a cap
- Place gun in downward position