MANUAL NO. 37-4 ISSUED 4/91

# TRIBOMATIC®
# MOBILE SHOP SYSTEM

PUBLICATION P/N 104 370

Nordson®

NORDSON CORPORATION

# TABLE OF CONTENTS



**System Component Manuals:**

| | |
|---|---|
| Automatic Gun: | Manual No. 37-1 |
| Hopper: | Manual No. 37-3 |
| Handgun: | Manual No. 37-6 |
| Powder Pump: | Manual No. 37-7 |

Data and specifications included within this manual are accurate at the time of publication. Nordson Corporation reserves the right to change the contents of this manual and/or specifications without notice. Nordson Corporation welcomes requests for information, comments and inquiries about its products.

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# Safety
# Powder Spray Systems

## *1. Introduction*

This section contains general safety instructions for using your Nordson equipment. Task- and equipment-specific warnings are included in other sections of this manual where appropriate. Note all warnings and follow all instructions carefully. Failure to do so may result in personal injury, death, or property damage.

To use this equipment safely,

- read and become familiar with the general safety instructions provided in this section of the manual before installing, operating, maintaining, or repairing this equipment.
- read and carefully follow the instructions given throughout this manual for performing specific tasks and working with specific equipment.
- store this manual within easy reach of personnel installing, operating, maintaining, or repairing this equipment.
- follow all applicable safety procedures required by your company, industry standards, and government or other regulatory agencies. Refer to the National Fire Protection Association (NFPA) standard 33 and to federal, state, regulatory agency, and local codes for rules and regulations covering installation and operation of powder spray systems.
- obtain and read Material Safety Data Sheets (MSDS) for all materials used.

## *2. Safety Symbols*

Become familiar with the safety symbols presented in this section. These symbols will alert you to safety hazards and conditions that may result in personal injury, death, or property and equipment damage.

**WARNING:** Failure to observe this warning may result in personal injury, death, or equipment damage.

## 2. Safety Symbols *(contd.)*

**WARNING:** Risk of electrical shock. Failure to observe this warning may result in personal injury, death, or equipment damage.

**WARNING:** Disconnect equipment from line voltage. Failure to observe this warning may result in personal injury, death, or equipment damage.

**WARNING:** Risk of explosion or fire. Fire, open flames, and smoking prohibited.

**WARNING:** Wear protective clothing, safety goggles, and approved respiratory protection. Failure to observe may result in serious injury.

**WARNING:** System or material pressurized. Relieve pressure. Failure to observe this warning may result in serious injury or death.

**CAUTION:** Failure to observe may result in equipment damage.

## 3. Qualified Personnel

"Qualified personnel" is defined here as individuals who thoroughly understand the equipment and its safe operation, maintenance, and repair. Qualified personnel are physically capable of performing the required tasks, familiar with all relevant safety rules and regulations, and have been trained to safely install, operate, maintain, and repair the equipment. It is the responsibility of the company operating the equipment to see that its personnel meet these requirements.

## *4. Intended Use*

**WARNING:** Use of this equipment in ways other than described in this manual may result in personal injury, death, or property and equipment damage. Use this equipment only as described in this manual.

Nordson Corporation cannot be responsible for injuries or damages resulting from nonstandard, unintended applications of its equipment. This equipment is designed and intended only for the purpose described in this manual. Uses not described in this manual are considered unintended uses and may result in serious personal injury, death, or property damage. Unintended uses may result from taking the following actions:

- making changes to equipment that have not been recommended or described in this manual or using parts that are not genuine Nordson replacement parts.
- failing to make sure that auxiliary equipment complies with approval agency requirements, local codes, and all applicable safety standards
- using materials or auxiliary equipment that are inappropriate or incompatible with your Nordson equipment
- allowing unqualified personnel to perform any task

## *5. Installation*

Read the installation section of all system component manuals before installing your equipment. A thorough understanding of system components and their requirements will help you install the system safely and efficiently.

- Allow only qualified personnel to install Nordson and auxiliary equipment.
- Use only approved equipment. Using unapproved equipment in an approved system may void agency approvals.
- Make sure all equipment is rated and approved for the environment in which you are using it.
- Follow all instructions for installing components and accessories.
- Install all electrical, pneumatic, gas, and hydraulic connections to local code.

## 5. Installation *(contd.)*

- Install locking, manual, shutoff valves in the air supply lines to the system. This allows you to relieve air pressure and lock out the pneumatic system before undertaking maintenance and repairs.
- Install a locking disconnect switch or breaker in the service line ahead of any electrical equipment.
- Use only electrical wire of sufficient gauge and insulation to handle the rated current demand. All wiring must meet local codes.
- Ground all electrically conductive equipment within 10 feet (3 meters) of the spray area. Ungrounded conductive equipment can store a static charge which could ignite a fire or cause an explosion if a hot spark is discharged.
- Route electrical wiring, electrostatic cables, and air hoses and tubing along a protected path. Make sure they will not be damaged by moving equipment. Do not bend electrostatic cables around a radius of less than 6 in. (152 mm).
- Install safety interlocks and approved, fast-acting fire detection systems. These shut down the spray system if the booth exhaust fan fails, a fire is detected, or other emergency situation develops.
- Make sure the spray area floor is conductive to ground and that the operator's platform is grounded.
- Use only designated lifting points or lugs to lift and move heavy equipment. Always balance and block loads when lifting to prevent shifting. Lifting devices must be inspected, certified, and rated for a greater weight than the equipment being lifted.
- Protect components from damage, wear, and harsh environmental conditions.
- Allow ample room for maintenance, material supply container drop-off and loading, panel accessibility, and cover removal.
- If safety devices must be removed for installation, install them immediately after the work is completed and check them for proper functioning.

## *6. Operation*

Only qualified personnel, physically capable of operating the equipment and with no impairments to their judgement or reaction times, should operate this equipment.

Read all component manuals before operating a powder spray system. A thorough understanding of all components and their operation will help you operate the system safely and efficiently.

- Use this equipment only in the environments for which it is rated. Do not operate this equipment in humid, flammable, or explosive environments unless it has been rated for safe operation in these environments.

- Before starting this equipment, check all safety interlocks, fire-detection systems, and protective devices such as panels and covers. Make sure all devices are fully functional. Do not operate the system if these devices are not working properly. Do not deactivate or bypass automatic safety interlocks or locked-out electrical disconnects or pneumatic valves.

- Know where EMERGENCY STOP buttons, shutoff valves, and fire extinguishers are located. Make sure they work. If a component malfunctions, shut down and lock out the equipment immediately.

- Before operating, make sure all conductive equipment in the spray area is connected to a true earth ground.

- Never operate equipment with a known malfunction or leak.

- Do not attempt to operate electrical equipment if standing water is present.

- Never touch exposed electrical connections on equipment while the power is ON.

- Do not operate the equipment at pressures higher than the rated maximum working pressure of any component in the system.

- Know the pinch points, temperatures, and pressures for all equipment that you are working with. Recognize potential hazards associated with these and exercise appropriate caution.

- Wear shoes with conductive soles, such as leather, or use grounding straps to maintain a connection to ground when working with or around electrostatic equipment.

## *6. Operation (contd.)*

- Do not wear or carry metallic objects (jewelry or tools) while working with or around electrostatic equipment. Ungrounded metal can store a static charge and cause harmful shocks.

- Maintain skin-to-metal contact between your hand and the gun handle to prevent shocks while operating manual electrostatic spray guns. If wearing gloves, cut away the palm or fingers.

- Keep parts of the body or loose clothing away from moving equipment or parts. Remove personal jewelry and cover or tie back long hair.

- Wear National Institute of Occupational Safety and Health (NIOSH) approved respirators, safety glasses or goggles, and gloves, and while handling powder containers, filling hoppers, operating spray equipment, and performing maintenance or cleaning tasks. Avoid getting powder coatings on your skin.

- Never point manual guns at yourself or other persons.

- Do not smoke in the spray area. A lit cigarette could ignite a fire or cause an explosion.

- If you notice electrical arcing in a spray area, shut down the system immediately. An arc can cause a fire or explosion.

- Shut off electrostatic power supplies and ground gun electrodes before making adjustments to powder spray guns.

- Shut off moving equipment before taking measurements or inspecting workpieces.

- Wash exposed skin frequently with soap and water, especially before eating or drinking. Do not use solvents to remove coating materials from your skin.

- Do not use high-pressure compressed air to blow powder off your skin or clothes. High-pressure compressed air can be injected under the skin and cause serious injury or death. Treat all high-pressure fittings and hoses as if they could leak and cause injury.

## *7. Less-obvious Dangers*

Operators should also be aware of less-obvious dangers in the workplace that often cannot be completely eliminated:

- exposed surfaces on the equipment which may be hot or have sharp edges and cannot be practically safeguarded
- electrical equipment which may remain energized for a period of time after the equipment has been shut off
- vapors and materials which may cause allergic reactions or other health problems
- automatic hydraulic, pneumatic, or mechanical equipment or parts that may move without warning
- unguarded, moving mechanical assemblies

## *8. Action in the Event of a System or Component Malfunction*

Do not operate a system that contains malfunctioning components. If a component malfunctions, turn the system OFF immediately.

- Disconnect and lock out electrical power. Close and lock out hydraulic and pneumatic shutoff valves and relieve pressures.
- Allow only qualified personnel to make repairs. Repair or replace the malfunctioning component.

## *9. Maintenance and Repair*

Allow only qualified personnel to perform maintenance, troubleshooting, and repair tasks.

- Always wear appropriate protective devices and use safety devices when working on this equipment.
- Follow the recommended maintenance procedures in your equipment manuals.
- Do not service or adjust any equipment unless another person trained in first aid and CPR is present.
- Use only genuine Nordson replacement parts. Using unapproved parts or making unapproved modifications to equipment may void agency approvals and create safety hazards.

## *9. Maintenance and Repair (contd.)*

- Disconnect, lock out, and tag electrical power at a disconnect or breaker in the service line ahead of electrical equipment before servicing.
- Do not attempt to service electrical equipment if there is standing water present. Do not service electrical equipment in a high-humidity environment.
- Use tools with insulated handles when working with electrical equipment.
- Do not attempt to service a moving piece of equipment. Shut off the equipment and lock out power. Secure equipment to prevent uncontrolled movement.
- Relieve air pressures before servicing equipment. Follow the specific instructions in this manual.
- Make sure that the room where you are working is sufficiently ventilated.
- If a “power on” test is required, perform the test carefully and then shut off and lock out power as soon as the test is over.
- Connect all disconnected equipment ground cables and wires after servicing the equipment. Ground all conductive equipment.
- Service lines connected to panel disconnect switches may still be energized unless they are disconnected. Make sure the power is off before servicing. Wait 5 minutes for capacitors to discharge after shutting off the electrical power.
- Turn off the electrostatic power supply and ground the gun electrode before adjusting or cleaning.
- Keep high-voltage connection points clean and insulated with dielectric grease or oil.
- Check all ground connections periodically with a megohm meter. Resistance to ground must not exceed one megohm. If arcing occurs, shut down the system immediately.

## *9. Maintenance and Repair (contd.)*

- Check interlock systems periodically to ensure their effectiveness.

**WARNING:** Operating faulty electrostatic equipment is hazardous and can cause electrocution, fire, or explosion. Make resistance checks part of your periodic maintenance program.

- Do not store flammable materials in the spray area or room. Keep containers of flammable materials far enough away from spray booths to prevent their inclusion in a booth fire. If a fire or explosion occurs, flammable materials in the area will increase the chances and the extent of personal injuries and property damage.

- Practice good housekeeping procedures. Do not allow dust or powder coatings to accumulate in the spray area or booth or on electrical equipment. Read this information carefully and follow instructions.

## *10. Disposal*

Dispose of equipment and materials used in operation and cleaning according to your local regulations.

See Manual 30-1 for Section 1 Safety

# SECTION 2
# EQUIPMENT FAMILIARIZATION

The TRIBOMATIC® Mobile Shop System is a self-contained tribocharging powder spray system. It is available in two configurations, with an automatic powder spray gun, or with a hand gun. The system also includes an 18 liter hopper, powder pump, and control console, mounted on a wheeled dolly. The hand gun version is designed to be used for touch up operations.

The entire system can be moved quickly and easily to wherever it is needed. A power cable, air supply line with quick disconnect, and ground wire are provided so that the system can be disconnected, moved and put back into service with little downtime and a minimum of effort.

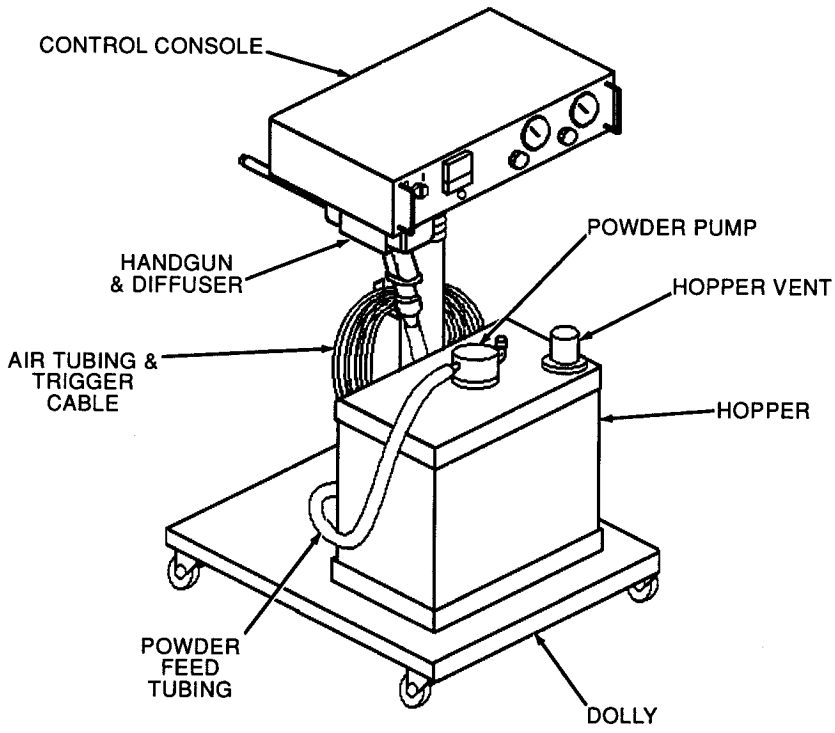


Figure 1 — Typical Mobile Shop System With Hand Gun

## DESCRIPTION - SYSTEM COMPONENTS

**CONTROL CONSOLE-** The control console is mounted on a pedestal with a vertical swivel incorporated which allows the face of the console to be positioned so that the gauges and charge meter can be easily read. The console provides the following controls:

Main Switch - Turns on power to operate the handgun trigger and charge meter and also turns on the air supply, allowing fluidizing air to flow to the hopper plenum and ejector and diffuser supply air to flow to the solenoid valve mounted on the rear panel. When used with an automatic gun, switch also actuates solenoid valve.

Charge Meter - Indicates charge imparted to the powder flowing through the gun by measuring the negative charge returning to ground through the trigger cable and console.

Air Regulator and Gauges - Three air pressure regulators are provided to control fluidizing, ejector and diffuser air pressure. Gauges are provided for ejector and diffuser air pressure.

Indicator Light - Lights when main switch is turned ON.

A 630mA, 250V slow-blow fuse is located in a fuseholder inside the control console.

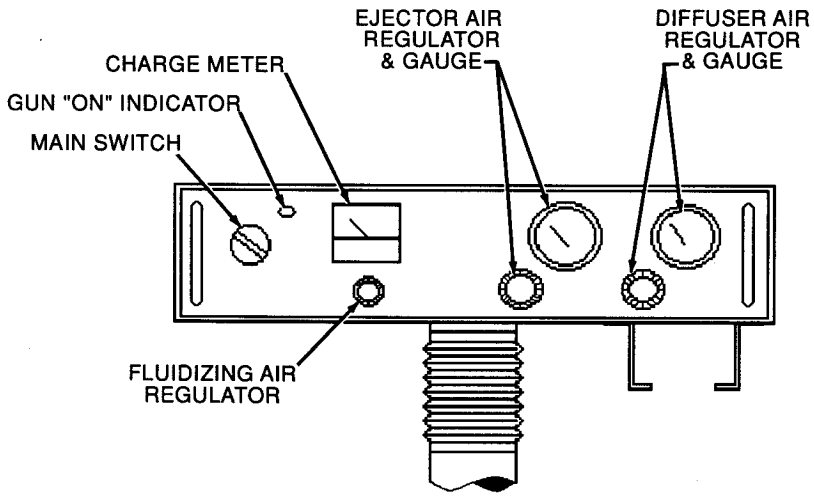


Figure 2 — Mobile Shop System Controls

**GUN** - The gun charges the powder passing through it by the tribo method, in which the friction of the powder particles against internal tubes gives the powder a positive charge. The gun picks up a negative charge, which is grounded through the ground cable (trigger cable), charge meter, dolly and earth ground. The handgun grip houses the trigger and an aluminum plate to ground the operator, preventing the buildup of a potentially dangerous charge. Refer to Nordson Manual No. 37-6 for more information.

**DIFFUSER** - The diffuser attaches to the gun with an interference fit provided by two O-rings. The powder feed tubing from the pump slips over a barbed tapered connector on the diffuser. The diffuser's purpose is to break up and atomize the powder before it enters the gun by injecting additional air into the powder and air stream.

**HOPPER** - The hopper has a capacity of 18 liters and consists of a cover, body, fluidizing plate and plenum. Mounted on the cover is a pump mount and exhaust vent with an integral filter screen. The plenum and fluidizing plate are secured to the body with four removeable channels. Powder is prevented from leaking out of the hopper by a gasket glued to the fluidizing plate. Air passing through the fluidizing plate and diffusing through the powder makes the powder act like a liquid, allowing it to be transported easily to the handgun. Refer to Nordson Manual No. 37-3 for more information.

Note: Optional exhaust vent tubing and booth exhaust mount are available so that hopper can be vented into booth.

**PUMP** - The powder pump uses a venturi effect (air passing over an opening at a right angle to the opening) to pull the fluidized powder out of the hopper and then forces it through the powder feed tubing into the diffuser. The pump contains no moving parts and is easily disassembled for cleaning and repair. Refer to Nordson Manual No. 37-7 for more information.

## DESCRIPTION - OPERATION

When the main switch is turned ON, fluidizing air flows to the hopper through the fluidizing regulator, enters the hopper through the plenum and passes through the fluidizing plate, which is made of a porous material. In passing through the powder, the fluidizing air breaks up agglomerations and makes the powder act like a liquid so that the powder pump can easily lift it out of the hopper and transport it to the gun.

When the handgun is triggered, a solenoid valve inside the console opens, allowing ejector and diffuser air to flow to the regulators and gauges. The main switch on automatic gun versions turns on fluidizing, ejector and diffuser air simultaneously.

Ejector air enters the powder pump through an assembly which includes a filter (installed to prevent powder from accidentally being blown back into the regulator) and a venturi nozzle and passes across the top of the suction tube, creating a slight vacuum which pulls the powder out of the hopper. The powder and air mixture is forced into the venturi throat and through the feed tubing to the diffuser and handgun.

Diffuser air is injected into the powder and air stream at the diffuser to help break up agglomerations of powder and to evenly distribute the powder for efficient charging in the gun.

As the powder flows through the gun, the particles impact against the walls of specially treated tubes, picking up a positive charge. The gun in turn becomes negatively charged and this charge is returned to ground through the charge meter. The charge meter gives an indication of how much of a charge the powder is receiving.

# SECTION 3
# INSTALLATION

1. Remove the system components from their packing crate and inspect for shipping damage. The control console must be installed onto the dolly. Set the dolly upright on its casters, and install the console onto the dolly, fitting together the two halves of the pedestal. Secure with the screws provided. Uncoil the air tubing, trigger cable (hand gun version only), power cable and ground wire and lay out on a clean surface. Fasten the ground wire (green/yellow) onto the ground connection at the base of the pedestal.

Note: If console does not stay in position when swiveled up or down, slide rubber boot down to expose swivel, loosen outer jam nuts and tighten inner nuts until console stays in position when adjusted. Tighten jam nuts and re-install boot on console.

2a. Handgun Version - Remove the handgun and diffuser from their packing and install diffuser into handgun grip. Remove extension and nozzle from their packing and place extension over end of gun. Install nozzle into end of extension.

2b. Automatic Gun Version - Remove automatic gun and diffuser from their packing and install diffuser in rear of gun. Unscrew ring nut from automatic gun and install spacer on end of gun and secure with ring nut. Install optional sprayhead and nozzles on spacer.

3. Connect diffuser air tubing (long blue tubing) to diffuser air fitting. Make sure tubing bottoms out in fitting before locking in place with collar.

4. Connect trigger cable to handgun. Note position of internal connector guides and align before pushing together connector halves. If using automatic gun, connect end of ground wire (green/yellow) with terminal to ground stud at rear of gun and secure with knob. Connect other end of ground wire (with plug) to control console.

Note: When disconnecting handgun trigger cable, grasp one half of connector in each hand and pull gently. Cable half of connector has a sliding sleeve which must move downwards slightly before connectors can be pulled apart.

5. Place hopper on dolly and install cover. Insert suction tube into powder pump tube holder and install pump into pump mounting with a twisting motion. End of suction tube should be approximately 1 inch (25 mm) above fluidizing plate.

6. Connect ejector air tubing (short black tubing) into pump air fitting. Bottom out tubing before locking into place with collar.

7. Connect fluidizing air tubing (short blue tubing) into air fitting on hopper plenum.

8. Remove three top screws from front and rear panels and loosen bottom screws. Lift off top of console and set voltage selector switch to correct input voltage. Connect power supply cable to nominal 110 or 220VAC, single phase outlet.

Note: Unit is supplied with a two prong power cable plug. If necessary, cut off plug supplied and install three prong plug. Wiring color code conforms to international standard: brown, L1; blue, L2; green/yellow, ground.

9. Connect system ground wire (green/yellow with clamp) to a true earth ground.

10. Connect powder feed tubing to pump and diffuser.

11. Connect blue air supply tubing to a supply of clean, dry air at a maximum pressure of 145 psi (10 bar). Use of a refrigerated air dryer and coalescent type filters is recommended.

Note: Quick disconnect coupling for .50 in. hose is supplied with system so that supply air may be connected without removing male quick disconnect supplied and converting to U.S. standard.

12. If used, install exhaust tubing to hopper vent and booth exhaust vent mount. Refer to Section 8, Parts Lists, for exhaust tubing and booth vent mount. These parts are optional and must be ordered separately.



Publication P/N 104 370

# SECTION 4
# OPERATING INSTRUCTIONS

**WARNING: Make sure equipment is grounded before starting spray operations. Operating without a ground connection will allow a potentially dangerous charge to build up on equipment.**

Fill hopper two-thirds full of clean, dry powder. Turn fluidizing air regulator knob counterclockwise to shut off air to hopper.

Remove hopper cover and turn on fluidizing air to hopper with main switch. Turn fluidizing air regulator knob clockwise while watching powder. Adjust air pressure to properly fluidize powder.

Note: For best results, allow powder to fluidize for a period of time, up to an hour if necessary, before beginning spray operations.

Replace hopper cover and secure with latches. Check to ensure powder pump is correctly installed on mounting and that all tubing connections are secure.

Handgun Version - Turn main switch to ON position. Aim handgun into booth and depress trigger.

Automatic Gun Version - Turn main switch to ON position.

Adjust ejector air pressure to approximately 2 bar (29 psi) and diffuser air pressure to approximately 3 bar (43 psi). Test spray and adjust air pressure to minimum required to achieve desired results. Keep air pressures as low as possible to minimize air consumption, powder use, and wear on powder contact surfaces.

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Publication P/N 104 370

# SECTION 5
# PREVENTIVE MAINTENANCE

**WARNING: Never blow out handgun with compressed air unless trigger cable is connected and dolly is grounded. Without a connection ground, a potentially dangerous charge could build up in gun.**

**NOTE: Never blow out diffuser without first disconnecting diffuser air tubing. Powder particles could be blown back into console, damaging gauge or regulator valve.**

## Periodic Maintenance

1. Remove powder from hopper and clean with compressed air and a clean, lint free cloth. Exhaust vent may be removed from cover, soaked in a non-toxic solvent and blown clean with compressed air, if necessary.

2. Disassemble powder pump and clean. Remove fitting from venturi nozzle and filter assembly, remove filter and clean. Inspect parts for wear and replace if necessary. Do not clean pump parts with a sharp object. Scratches on powder contact surfaces will contribute to powder buildup and impact fusion.

3. With trigger cable or ground wire connected to gun and dolly grounded, remove diffuser and blow out gun with compressed air. Disassemble diffuser and clean. Note position of black tape on diffuser filter and replace so that tape is directly under air inlet when reassembling diffuser.

4. Place end of powder feed tubing in booth and blow out with compressed air.

5. Wipe down control console and dolly with a clean, dry cloth.

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Publication P/N 104 370

# SECTION 6
# TROUBLESHOOTING

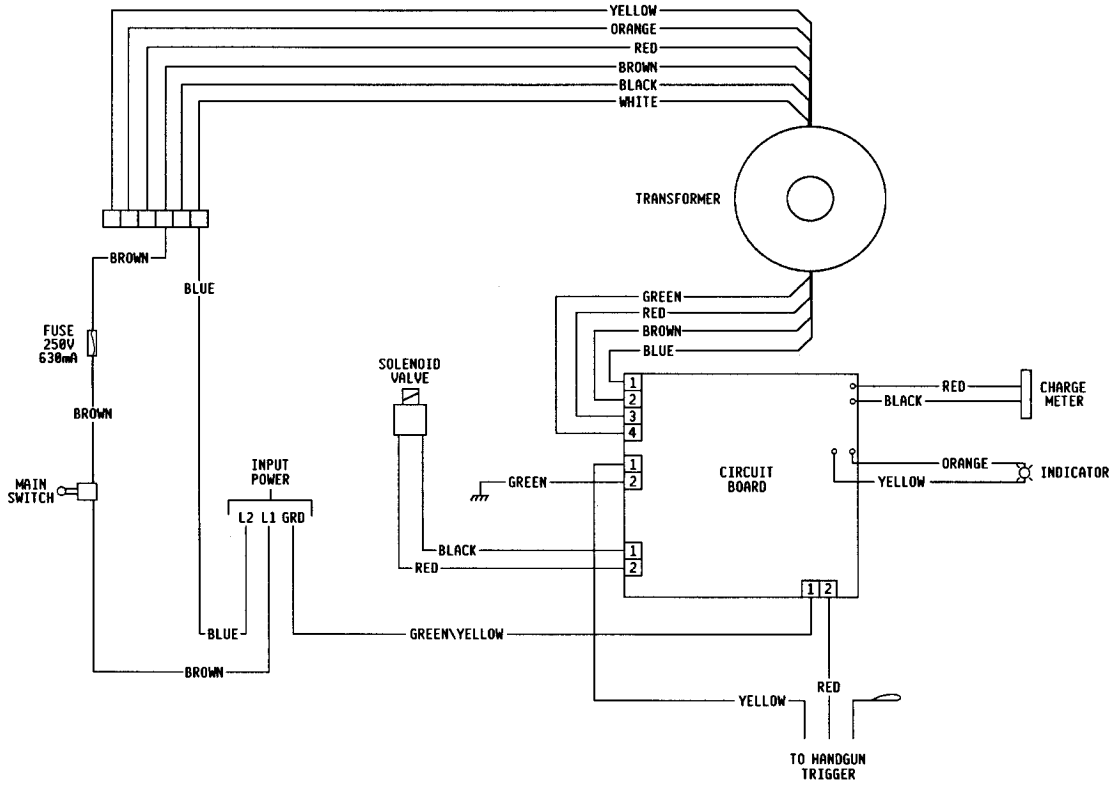


Figure 3 — Electrical Schematic

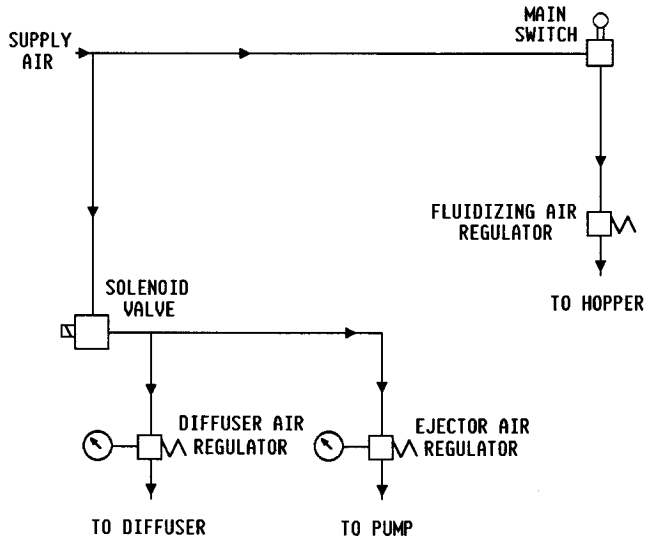


Figure 4 — Pneumatic Schematic

**PROBLEM:**

Powder does not flow when gun triggered.

**Probable Cause:**

1. No air supply or flow rate air pressure set too low.
2. Blockage in system.
3. Poor trigger cable connection, trigger malfunction or circuit board malfunction.
4. Solenoid valve malfunction or circuit board malfunction.
5. Ejector air pressure regulator malfunction.

**Suggested Correction:**

1. Check air supply to system. Increase flow rate air pressure.
2. Disconnect powder feed tubing at pump, blow out with compressed air. Disassemble pump and diffuser and clean if necessary. Check powder supply in hopper for dampness and replace if necessary. Check air dryer and filters.
3. Check trigger cable connection. Trigger microswitch should click when depressed. Check continuity between pins 1 & 3 or 3 & 4 with trigger depressed. If trigger switch has malfunctioned ohmmeter will show open circuit. Refer to Figure 5 for pin designations. Check for 24VDC across trigger leads at circuit board. Replace circuit board if voltage not present.
4. Check for air output from electro-pnuematic solenoid valve mounted on rear panel when gun is triggered. Replace valve if valve does not open on trigger signal. Voltage across solenoid connector terminals should be 24VDC when gun is triggered.
5. Check for air output from regulator. Replace regulator if no air flows from regulator with trigger depressed.

**PROBLEM:**

Powder puffing from gun.

**Probable Cause:**

1. Ratio of diffuser air to ejector air incorrect.
2. Diffuser filter clogged.
3. Powder feed hose too short.

**Suggested Correction:**

1. Adjust diffuser to ejector air pressure ratio. Refer to Section 4, Operation, for instructions.
2. Disassemble diffuser and clean.
3. Install longer powder feed hose.

**PROBLEM:**

Poor powder charging (no electrostatic wrap or adhesion).

**Probable Cause:**

1. Ejector air pressure too high, powder velocity prevents efficient charging.
2. Powder not suitable for tribo charging.
3. Workpiece not properly grounded.

**Suggested Correction:**

1. Reduce ejector air pressure while maintaining proper ejector to diffuser air ratio.
2. Consult with powder manufacturer.
3. Check conveyor rollers and hangers for coating buildup that could affect ground. Resistance between workpiece and earth ground should not exceed one megohm.

**PROBLEM:**

Inadequate powder flow.

**Probable Cause:**

1. Wet powder causing blockage in system.
2. Poor fluidization of powder.
3. Ratio of diffuser to ejector air incorrect.

**Suggested Correction:**

1. Check powder in feed hopper for dampness. Check air dryer and filters for proper operation. Clean system components and feed tubing.
2. Increase or decrease fluidizing air pressure. Allow powder enough time to fluidize properly before beginning spray operations.
3. Adjust diffuser and ejector air pressure settings. Refer to Section 4, Operation, for instructions.

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Publication P/N 104 370

# SECTION 7
# PARTS LISTS

## INTRODUCTION

This section contains parts lists for the two available Mobile Shop Systems and an illustration and parts list for the control module. Refer to the following manuals for parts lists for other components of the system:

- Powder Pump: Manual No. 37-7
- Automatic Gun & Diffuser: Manual No. 37-1
- Handgun & Diffuser: Manual No. 37-6
- 18 Liter Hopper: Manual No. 37-3

The number in the **REF.** column indicates the number assigned to the part in the illustration preceding the list. A dash or the code **NS** (Not Shown) is used for parts that are not shown in the illustration.

A letter in the **NOTE** column refers to a note below the parts list which gives additional information concerning that part. **Special attention should be given to noted parts.**

The six digit number in the **PART NO.** is the Nordson part number assigned to that particular part. A series of dashes in this column means that the part cannot be ordered separately; it can only be obtained as part of the assembly or subassembly it is a component of.

The **DESCRIPTION** column gives the official Nordson name of the part, together with its dimensions and other physical properties where appropriate, and is the name that should be used when ordering replacement parts. Indented parts are components of assemblies and/or subassemblies. For example:

| REF. | NOTE | PART NO. | DESCRIPTION |
|---|---|---|---|
| 1 | | 630 407 | Handgun, Complete |
| 2 | | 630 405 | • Diffuser |
| 3 | | 630 419 | • • Connector, Tubing |

If you order item 1, items 2 & 3 will be included.
If you order item 2, item 3 will be included.
If you order item 3, you will receive item 3 only.

The number in the **QTY.** column is the quantity required per unit or assembly. When the quantity is not applicable, a dash will appear in the column. An "**ASR**" in the QTY. column means that the quantity required per installation should be ordered.

## MOBILE SHOP SYSTEM WITH HANDGUN

| Part No. | Note | Description | Qty. |
|---|---|---|---|
| 630 700 | A | System, Mobile Shop, w/ Handgun | 1 |
| 630 034 | B | • Pump, Powder | 1 |
| 630 215 | | • Coupling, Quick Disconnect | 1 |
| 630 231 | B | • Hopper, Powder, 18 Liter | 1 |
| 630 234 | | • Tube, Suction, 18 L Hopper | 1 |
| 630 402 | | • Extension, Handgun | 1 |
| 630 403 | | • Support, Deflector | 1 |
| 630 404 | | • Deflector, Pen., 2,5 mm | 1 |
| 630 425 | B | • Diffuser, Handgun, Straight | 1 |
| 630 410 | B | • Handgun, Gen. 2 | 1 |
| 630 412 | | • Kit, Spare Parts, MSS | 1 |
| 630 701 | | • Dolly, Mobile Shop System | 1 |
| 630 702 | C | • Module, Control, MSS | 1 |
| 630 061 | | • Tubing, Powder, Feed, 12mm | 5M |

Note (A) - This system includes only the electrically triggered Handgun.
Note (B) - Refer to manuals listed on page 7-1 for parts lists.
Note (C) - Refer to parts list on following page.

## MOBILE SHOP SYSTEM WITH AUTOMATIC GUN

| Part No. | Note | Description | Qty. |
|---|---|---|---|
| 630 760 | | System, MSS, Automatic | 1 |
| 630 011 | | • Spacer, L=82mm | 1 |
| 630 013 | | • Nut, Ring | 1 |
| 630 014 | A | • Chargetube, Tribomatic | 1 |
| 630 292 | A | • Diffuser, Gun, Gen. 2 | 1 |
| 630 034 | A | • Pump, Powder | 1 |
| 630 215 | | • Coupling, Quick Disconnect | 1 |
| 630 231 | A | • Hopper, Powder, 18 Liter | 1 |
| 630 234 | | • Tube, Suction, 18 L Hopper | 1 |
| 630 701 | | • Dolly, Mobile Shop System | 1 |
| 630 702 | B | • Module, Control, MSS | 1 |
| 630 761 | | • Connector, Auto Gun, MSS | 1 |
| 630 765 | | • Kit, Spare Parts, MSS Auto | 1 |
| 630 061 | | • Tubing, Powder, Feed, 12mm | 10M |

Note (A) - Refer to manuals described on page 7-1 for parts lists.
Note (B) - Refer to parts list on following page.

## MOBILE SHOP SYSTEM CONTROL CONSOLE PARTS LIST

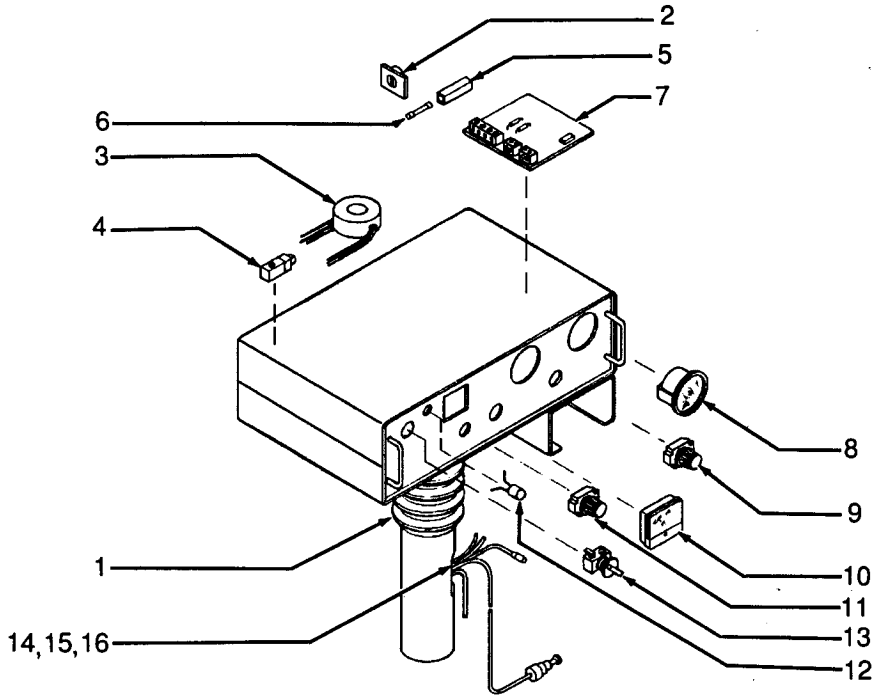


Figure 5 — Exploded View of Control Console

| Ref. | Note | Part No. | Description | Qty. |
|---|---|---|---|---|
| - | | 630 702 | Module, Control, MSS | 1 |
| 1 | | 630 706 | • Boot, Rubber | 1 |
| 2 | | 630 577 | • Switch, Voltage Selector | 1 |
| 3 | | 630 578 | • Transformer | 1 |
| 4 | | 630 829 | • Valve, Solenoid | 1 |
| 5 | | 630 574 | • Holder, Fuse | 1 |
| 6 | | 630 576 | • Fuse, 630mA, 250V | 1 |
| 7 | | 630 573 | • Board, Circuit | 1 |
| 8 | | 630 550 | • Gauge, 0-4 Bar, 50mm Dia. | 2 |
| 9 | | 630 082 | • Valve, Air Regulator | 2 |
| 10 | | 630 566 | • Meter, Charge | 1 |
| 11 | | 630 570 | • Valve, Air Regulator | 1 |
| 12 | | 630 579 | • Light, Indicator | 1 |
| 13 | | 630 572 | • Switch, Main | 1 |
| 14 | | 630 599 | • Tubing, 6mm, Blue | ASR |
| 15 | | 630 597 | • Tubing, 4mm, Blue | ASR |
| 16 | | 630 598 | • Tubing, 4mm, Black | ASR |
| 17 | | 630 703 | • Cable, Trigger, 5 M | 1 |

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# SECTION 8
# TECHNICAL DATA

## Dimensions:

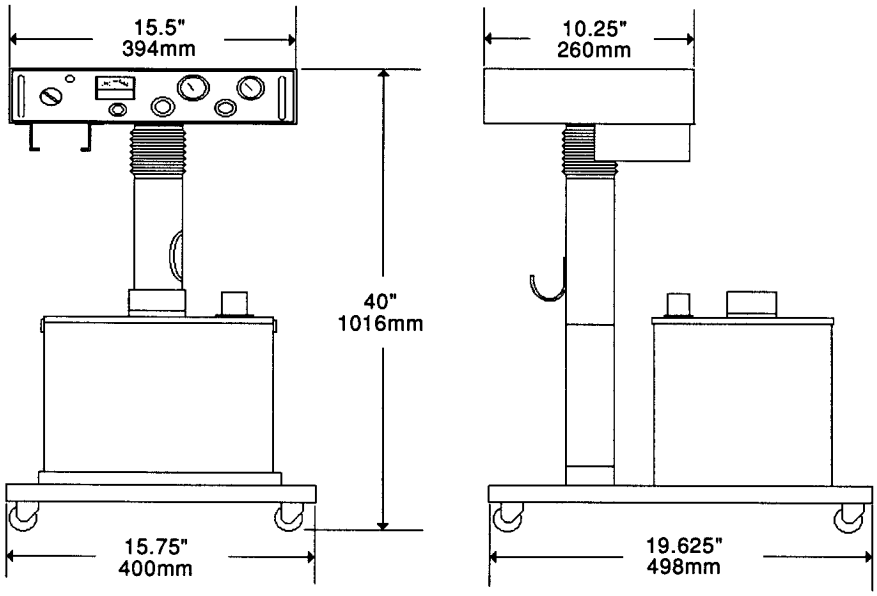


Figure 6 — Mobile Shop System Dimensions

## Electrical:

Nominal input voltage 110-220VAC, Single Phase @ 50/60 Hz.

## Air:

| | |
|---|---|
| Maximum Supply Pressure: | 145 psi (10 bar) |
| Minimum Supply Pressure: | 87 psi (6 bar) |
| Maximum Consumption: | 300 liters/min |

## Hopper Capacity:

18 liters