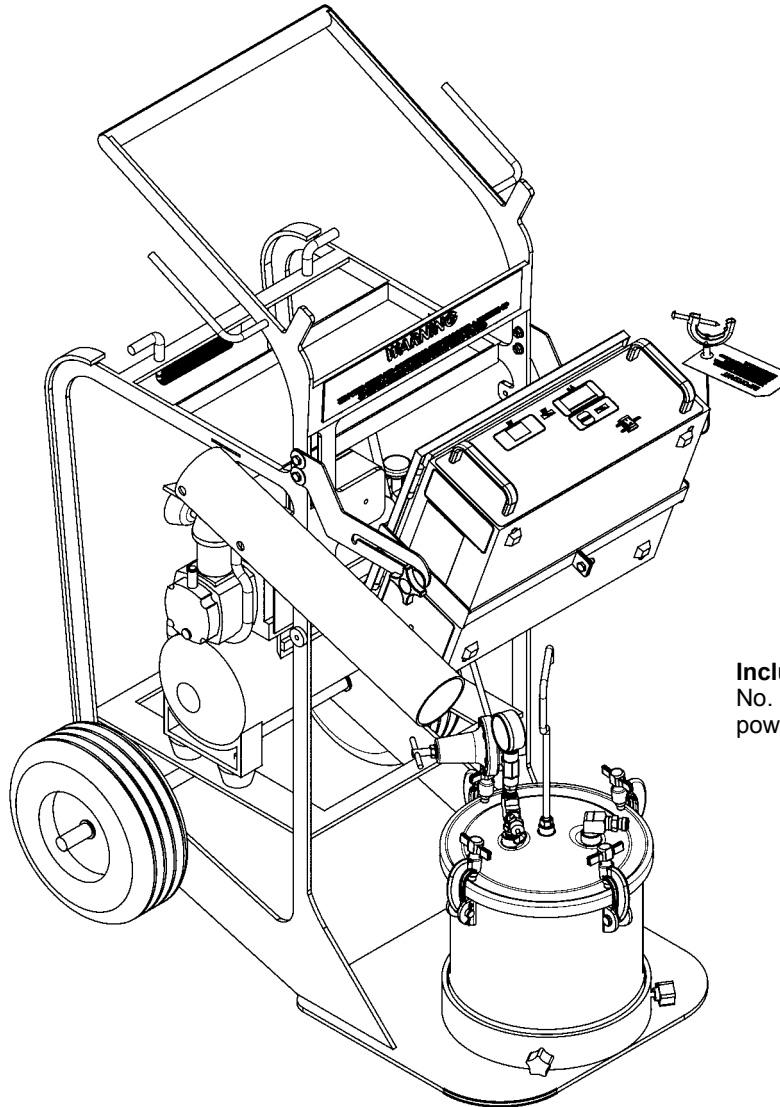


SERVICE INSTRUCTION
SI-04-02.8
(Replaces SI-04-02.7)
MARCH - 2015

Ransburg

DEUCE CART PACKAGE



Includes:

No. 2 handgun 17338-01 and
power supply 70361-05

MODEL: 79297

IMPORTANT: Before using this equipment, carefully read SAFETY PRECAUTIONS, starting on page 1, and all instructions in this manual. Keep this Service Manual for future reference.

Service Manual Price: \$50.00 (U.S.)

NOTE: This manual has been changed from revision **SI-04-02.7** to revision **SI-04-02.8**. Reasons for this change are noted under “Manual Change Summary” on page 15 of this manual.

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SAFETY

SAFETY PRECAUTIONS

Before operating, maintaining or servicing any Ransburg electrostatic coating system, read and understand all of the technical and safety literature for your Ransburg products. This manual contains information that is important for you to know and understand. This information relates to USER SAFETY and PREVENTING EQUIPMENT PROBLEMS. To help you recognize this information, we use the following symbols. Please pay particular attention to these sections.

A WARNING! states information to alert you to a situation that might cause serious injury if instructions are not followed.

A CAUTION! states information that tells how to prevent damage to equipment or how to avoid a situation that might cause minor injury.

A NOTE is information relevant to the procedure in progress.

While this manual lists standard specifications and service procedures, some minor deviations may be found between this literature and your equipment. Differences in local codes and plant requirements, material delivery requirements, etc., make such variations inevitable. Compare this manual with your system installation drawings and appropriate Ransburg equipment manuals to reconcile such differences.


Careful study and continued use of this manual will provide a better understanding of the equipment and process, resulting in more efficient operation, longer trouble-free service and faster, easier troubleshooting. If you do not have the manuals and safety literature for your Ransburg system, contact your local Ransburg representative or Ransburg.



WARNING

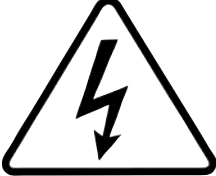
- The user **MUST** read and be familiar with the Safety Section in this manual and the Ransburg safety literature therein identified.
- This manual **MUST** be read and thoroughly understood by **ALL** personnel who operate, clean or maintain this equipment! Special care should be taken to ensure that the **WARNINGS** and safety requirements for operating and servicing the equipment are followed. The user should be aware of and adhere to ALL local building and fire codes and ordinances as well as **NFPA-33 SAFETY STANDARD, LATEST EDITION**, prior to installing, operating, and/or servicing this equipment.




WARNING

- The hazards shown on the following pages may occur during the normal use of this equipment. Please read the hazard chart beginning on page 2.

| <p>AREA Tells where hazards may occur.</p> | <p>HAZARD Tells what the hazard is.</p> | <p>SAFEGUARDS Tells how to avoid the hazard.</p> |
|--|---|---|
| <p>Spray Area</p>  | <p>Fire Hazard</p> <p>Improper or inadequate operation and maintenance procedures will cause a fire hazard.</p> <p>Protection against inadvertent arcing that is capable of causing fire or explosion is lost if any safety interlocks are disabled during operation. Frequent Power Supply or Controller shutdown indicates a problem in the system requiring correction.</p> | <p>Fire extinguishing equipment must be present in the spray area and tested periodically.</p> <p>Spray areas must be kept clean to prevent the accumulation of combustible residues.</p> <p>Smoking must never be allowed in the spray area.</p> <p>The high voltage supplied to the atomizer must be turned off prior to cleaning, flushing or maintenance.</p> <p>When using solvents for cleaning:</p> <ul style="list-style-type: none"> • Those used for equipment flushing should have flash points equal to or higher than those of the coating material. • The flash point of the cleaning solvent shall be at least 15° C (27° F) above the ambient temperature. Otherwise, the cleaning process must be carried out in an area with forced air ventilation. It is the end users responsibility to insure this condition is met. <p>Spray booth ventilation must be kept at the rates required by NFPA-33, OSHA, country, and local codes. In addition, ventilation must be maintained during cleaning operations using flammable or combustible solvents.</p> <p>Electrostatic arcing must be prevented. Safe sparking distance must be maintained between the parts being coated and the applicator. A distance of 1 inch for every 10KV of output voltage is required at all times.</p> <p>Test only in areas free of combustible material. Testing may require high voltage to be on, but only as instructed.</p> <p>Non-factory replacement parts or unauthorized equipment modifications may cause fire or injury.</p> <p>If used, the key switch bypass is intended for use only during setup operations. Production should never be done with safety interlocks disabled.</p> <p>Never use equipment intended for use in waterborne installations to spray solvent based materials.</p> <p>The paint process and equipment should be set up and operated in accordance with NFPA-33, NEC, OSHA, local, country, and European Health and Safety Norms.</p> |

| <p>AREA Tells where hazards may occur.</p> | <p>HAZARD Tells what the hazard is.</p> | <p>SAFEGUARDS Tells how to avoid the hazard.</p> |
|---|---|---|
| <p>Spray Area</p>  | <p>Explosion Hazard</p> <p>Improper or inadequate operation and maintenance procedures will cause a fire hazard.</p> <p>Protection against inadvertent arcing that is capable of causing fire or explosion is lost if any safety interlocks are disabled during operation.</p> <p>Frequent Power Supply or Controller shutdown indicates a problem in the system requiring correction.</p> | <p>Electrostatic arcing must be prevented. Safe sparking distance must be maintained between the parts being coated and the applicator. A distance of 1 inch for every 10KV of output voltage is required at all times.</p> <p>Unless specifically approved for use in hazardous locations, all electrical equipment must be located outside Class I or II, Division 1 or 2 hazardous areas, in accordance with NFPA-33.</p> <p>Test only in areas free of flammable or combustible materials.</p> <p>The current overload sensitivity (if equipped) MUST be set as described in the corresponding section of the equipment manual. Protection against inadvertent arcing that is capable of causing fire or explosion is lost if the current overload sensitivity is not properly set. Frequent power supply shutdown indicates a problem in the system which requires correction.</p> <p>Always turn the control panel power off prior to flushing, cleaning, or working on spray system equipment.</p> <p>Before turning high voltage on, make sure no objects are within the safe sparking distance.</p> <p>Ensure that the control panel is interlocked with the ventilation system and conveyor in accordance with NFPA-33, EN 50176.</p> <p>Have fire extinguishing equipment readily available and tested periodically.</p> |
| <p>General Use and Maintenance</p>  | <p>Improper operation or maintenance may create a hazard.</p> <p>Personnel must be properly trained in the use of this equipment.</p> | <p>Personnel must be given training in accordance with the requirements of NFPA-33, EN 60079-0.</p> <p>Instructions and safety precautions must be read and understood prior to using this equipment.</p> <p>Comply with appropriate local, state, and national codes governing ventilation, fire protection, operation maintenance, and housekeeping. Reference OSHA, NFPA-33, EN Norms and your insurance company requirements.</p> |

| <p>AREA Tells where hazards may occur.</p> | <p>HAZARD Tells what the hazard is.</p> | <p>SAFEGUARDS Tells how to avoid the hazard.</p> |
|---|---|--|
| <p>Spray Area / High Voltage Equipment</p>  | <p>Electrical Discharge</p> <p>There is a high voltage device that can induce an electrical charge on ungrounded objects which is capable of igniting coating materials.</p> <p>Inadequate grounding will cause a spark hazard. A spark can ignite many coating materials and cause a fire or explosion.</p> | <p>Parts being sprayed and operators in the spray area must be properly grounded.</p> <p>Parts being sprayed must be supported on conveyors or hangers that are properly grounded. The resistance between the part and earth ground must not exceed 1 meg ohm. (Refer to NFPA-33, EN 50176).</p> <p>Operators must be grounded. Rubber soled insulating shoes should not be worn. Grounding straps on wrists or legs may be used to assure adequate ground contact.</p> <p>Operators must not be wearing or carrying any ungrounded metal objects.</p> <p>When using an electrostatic handgun, operators must assure contact with the handle of the applicator via conductive gloves or gloves with the palm section cut out.</p> <p>NOTE: REFER TO NFPA-33 OR SPECIFIC COUNTRY SAFETY CODES REGARDING PROPER OPERATOR GROUNDING.</p> <p>All electrically conductive objects in the spray area, with the exception of those objects required by the process to be at high voltage, must be grounded. Grounded conductive flooring must be provided in the spray area.</p> <p>Always turn off the power supply prior to flushing, cleaning, or working on spray system equipment.</p> <p>Unless specifically approved for use in hazardous locations, all electrical equipment must be located outside Class I or II, Division 1 or 2 hazardous areas, in accordance with NFPA-33.</p> |

| <p>AREA Tells where hazards may occur.</p> | <p>HAZARD Tells what the hazard is.</p> | <p>SAFEGUARDS Tells how to avoid the hazard.</p> |
|--|---|---|
| <p>Electrical Equipment</p>  | <p>Electrical Discharge</p> <p>High voltage equipment is utilized in the process. Arcing in the vicinity of flammable or combustible materials may occur. Personnel are exposed to high voltage during operation and maintenance.</p> <p>Protection against inadvertent arcing that may cause a fire or explosion is lost if safety circuits are disabled during operation.</p> <p>Frequent power supply shut-down indicates a problem in the system which requires correction.</p> <p>An electrical arc can ignite coating materials and cause a fire or explosion.</p> | <p>Unless specifically approved for use in hazardous locations, the power supply, control cabinet, and all other electrical equipment must be located outside Class I or II, Division 1 and 2 hazardous areas in accordance with NFPA-33 and EN 50176.</p> <p>Turn the power supply OFF before working on the equipment.</p> <p>Test only in areas free of flammable or combustible material.</p> <p>Testing may require high voltage to be on, but only as instructed.</p> <p>Production should never be done with the safety circuits disabled.</p> <p>Before turning the high voltage on, make sure no objects are within the sparking distance.</p> |
| <p>Toxic Substances</p>  | <p>Certain material may be harmful if inhaled, or if there is contact with the skin.</p> | <p>Follow the requirements of the Material Safety Data Sheet supplied by coating material manufacturer.</p> <p>Adequate exhaust must be provided to keep the air free of accumulations of toxic materials.</p> <p>Use a mask or respirator whenever there is a chance of inhaling sprayed materials. The mask must be compatible with the material being sprayed and its concentration. Equipment must be as prescribed by an industrial hygienist or safety expert, and be NIOSH approved.</p> |
| <p>Spray Area</p>  | <p>Explosion Hazard – Incompatible Materials</p> <p>Halogenated hydrocarbon solvents for example: methylene chloride and 1,1,1,-Trichloroethane are not chemically compatible with the aluminum that might be used in many system components. The chemical reaction caused by these solvents reacting with aluminum can become violent and lead to an equipment explosion.</p> | <p>Aluminum is widely used in other spray application equipment - such as material pumps, regulators, triggering valves, etc. Halogenated hydrocarbon solvents must never be used with aluminum equipment during spraying, flushing, or cleaning. Read the label or data sheet for the material you intend to spray. If in doubt as to whether or not a coating or cleaning material is compatible, contact your coating supplier. Any other type of solvent may be used with aluminum equipment.</p> |

INTRODUCTION

DESCRIPTION

The deuce cart is a self contained unit on wheels and can be transported and used in remote areas. It is a portable way to supply material and store the No. 2 process handgun all in one unit. It is commonly used at jobsite locations, such as offices, hospitals, painting contractors, job shops, and industrial finishing painter maintenance markets. Its uses include lockers, bathroom stalls, machinery, fencing, ornamental iron, playground equipment, steel doors and frames, patio furniture,

window extrusions, guard railings, steel roofing, conductive glass coatings, farm implements, snow plow equipment, water piping, etc. It is meant for use with solvent based coatings only. Oil industrial enamels, or alkyd oil based enamels, 2k and 1k epoxies and urethanes with resistivity range of .1 to 1 meg ohms are common materials. It has a ASME coded pressure tank and air compressor and foam filled tires included with the package.

| 79297 DEUCE CART PACKAGE OPTIONS | |
|---|---|
| Part # | Description |
| 79297-01 | No. 2 Handgun w/Power Supply (Includes 25 Ft. Cable & Hose), Cart Assembly |
| 79297-02 | No. 2 Handgun w/Power Supply (Includes 36 Ft. Cable & Hose), Cart Assembly |
| 79297-03 | No. 2 Handgun w/Power Supply (Includes 25 Ft. Cable & Hose), Cart Assembly, 76708-00 Performance Package* |
| 79297-04 | No. 2 Handgun w/Power Supply (Includes 36 Ft. Cable & Hose), Cart Assembly, 76708-00 Performance Package* |

* 76708-00 Performance Package includes: (2) Brush Assemblies, (5) Spray Gun Covers, (1) 4-inch Bell Assembly, (3) 4-inch Feed Tube Assemblies

NOTE

- This literature contains parts lists and figures that identify component parts of the 80002 Cart Assembly which is comprised of the following additional assemblies: 80001 Air Compressor Assembly and 79281 Pressure Pot Assembly.
- This document does not cover parts associated with the 19372 No. 2 Handgun Unit (Gun & Power Supply) or the 80001 Air Compressor. For further information on these units, refer to literature associated with that particular equipment.

INSTALLATION

POWER SUPPLY MOUNTING INSTRUCTIONS:

1. Assemble U-Brackets around power supply as shown. Tighten all bolts securely adjust to appropriate angle to achieve best viewing of the power supply display based on application” and reword the first part by adding in “tighten two bolts top and bottom to secure power supply.

| NOTE |
|--|
| <p>➤ Follow instruction for assembly of power supply see figure 4.</p> |

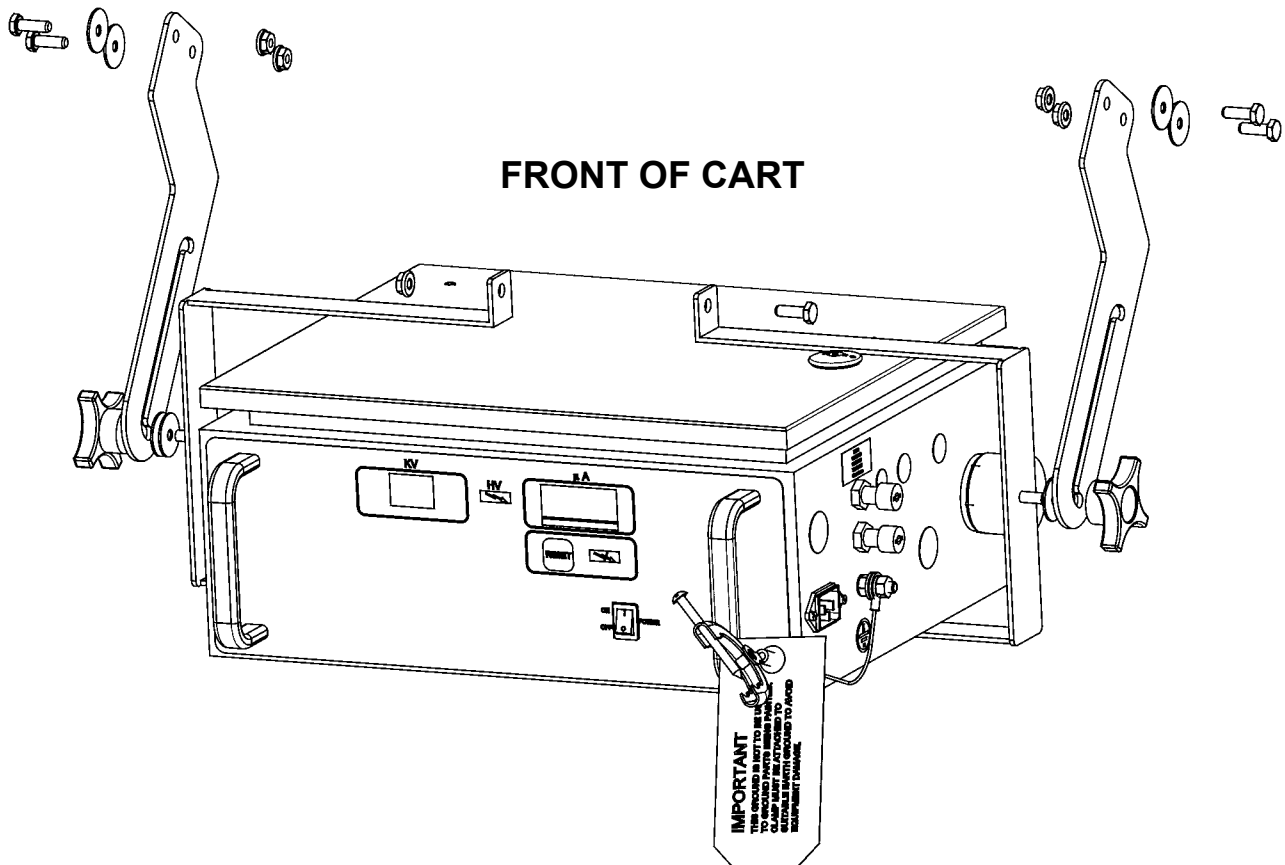


Figure 4: Diagram - Mounting Power Supply to Cart

OPERATION

INSTRUCTIONS

1. Fill the pressure pot with appropriate fluid. Tighten the lid properly to seal pressure. Adjust the pressure pot regulator to a small amount of pressure to insure the bell of the No. 2 process will not be flooded.

**WARNING**

► The power supply and compressor must be located a minimum of 20' (6.8m) from the target being sprayed. This distance insures safe operation of the unit.

2. Plug in to 110/120 V outlet the power supply and the compressor power.
3. Turn the power supply on.
4. On a test panel, trigger the No. 2 process gun and adjust the pressure pot regulator till the proper pattern is generated.
5. Once the pattern size and flow rate is determined, spray the grounded target using techniques listed in the application manual.

PARTS IDENTIFICATION

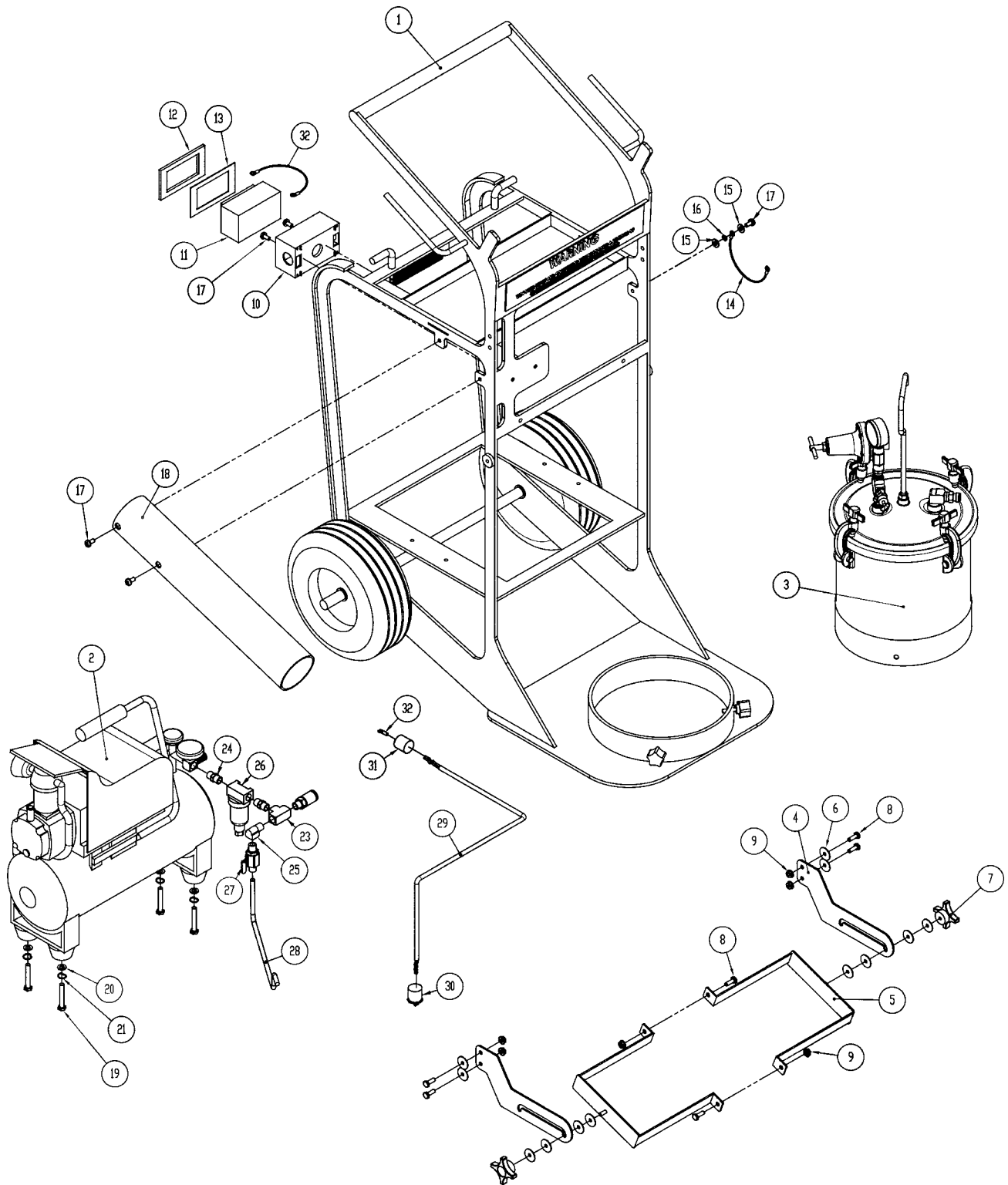


Figure 1: 80002 Cart Assembly

| 80002 CART ASSEMBLY - PARTS LIST (Figure 1) | | | |
|--|--|---------------|-------------------|
| Item # | Description | Part # | Qty |
| 1 | Two-Wheel Cart Assembly | 79989-00 | 1 |
| 2 | Air Compressor | 80001 | 1 |
| 3 | PT Code Pressure Tank Assembly (Zinc Plated) | 79281-00 | 1 |
| 4 | Bracket Arm | 80162-00* | 2 |
| 5 | U-Bracket | 80163-00* | 2 |
| 6 | .25" x 1" Washer | 71211-01* | 12 |
| 7 | Knob | 80164-00* | 2 |
| 8 | 1/4-20 Serrated Flange Bolt | AC-3710* | 6 |
| 9 | 1/4-20 Serrated Flange Nut | AC-3903* | 6 |
| 10 | Single Gang Outlet Box | 79287-00 | 1 |
| 11 | Receptacle Electric GFCI 15 AMPS | 79290-00 | 1 |
| 12 | Water Proof Cover, Outer | 79285-02 | 1 |
| 13 | Water Proof Cover Gasket | 79285-01 | 1 |
| 14 | Grounding Wire Assembly 18" | 79292-00 | 1 |
| 15 | Flat Washer 1/4 | 55-6505-CD | 2 |
| 16 | Lockwasher Ext Tooth 1/4 | 7567-05 | 1 |
| 17 | Pan Head Screw 1/4-20 x 1/2 | 20-202 | 5 |
| 18 | Holster with Label, Deuce Cart | 79458-00 | 1 |
| 19 | Bolt Hex M8-1.25 x 50MM ZN PLTD | 80371-00 | 4 |
| 20 | Washer Flat M8 ZN PLTD | 80372-00 | 4 |
| 21 | Lock Washer M8 Split ZN PLTD | 80370-00 | 4 |
| 22 | Tee 1/4 NPT | 3364-02 | 1 |
| 23 | Hex Nipple 1/4 NPT | 8115-01 | 2 |
| 24 | Elbow 1/4 NPT | 79332-00 | 1 |
| 25 | Coalescing Filter | 79987-00 | 1 |
| 26 | Ball Valve | VA-542 | 1 |
| 27 | Air Hose Assembly | HA-57030 | 1 |
| 28 | Electrical Cord 14/3, 300V | 79293-25 | 1 |
| 29 | Electrical Plug NEMA 5-15, 15 AMPS | 79291-00 | 1 |
| 30 | Connector Strain Relief Line Cord | 79288-00 | 1 |
| 31 | Spade Terminal 16-14 AWG #10 | 79294-00 | 1 |
| 32 | Grounding Wire Assembly 14" | 79295-00 | 1 |
| 33 | Deuce Cart Bracket Kit Assembly | 80165-00 | *=Included in Kit |

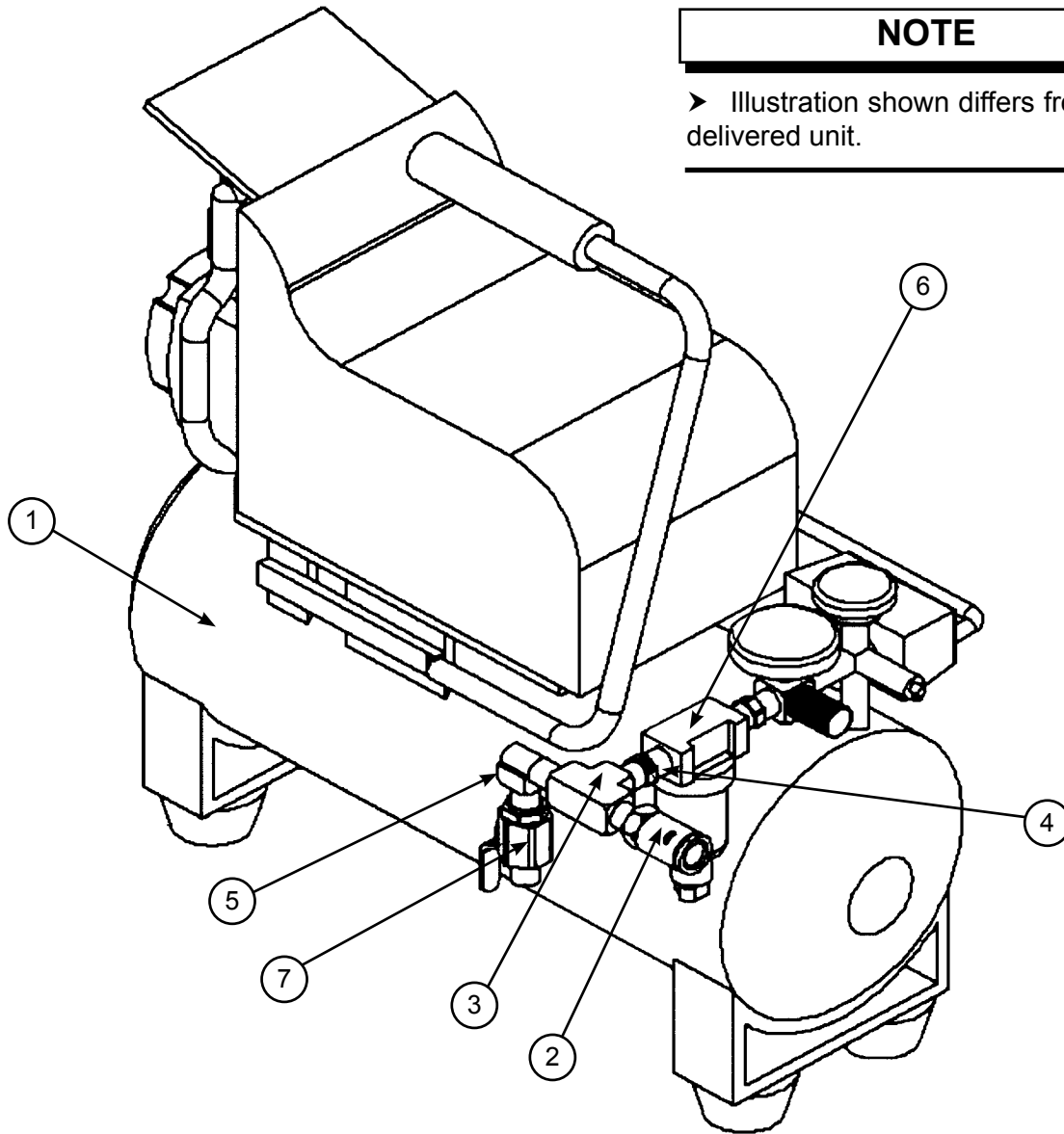


Figure 2: 80001 Air Compressor Assembly

| 80001 AIR COMPRESSOR ASSEMBLY - PARTS LIST | | | |
|--|--------------------|-----------|-----------|
| Item # | Description | Part # | Qty |
| 1 | Air Compressor | 79988-00 | 1 |
| 2 | Q.D. Air Fitting | Reference | Reference |
| 3 | Tee 1/4 NPT | 3364-02 | 1 |
| 4 | Hex Nipple 1/4 NPT | 8115-01 | 2 |
| 5 | Elbow 1/4 NPT | 79332-00 | 1 |
| 6 | Coalescing Filter | 79987-00 | 1 |
| 7 | Ball Valve | VA-542 | 1 |

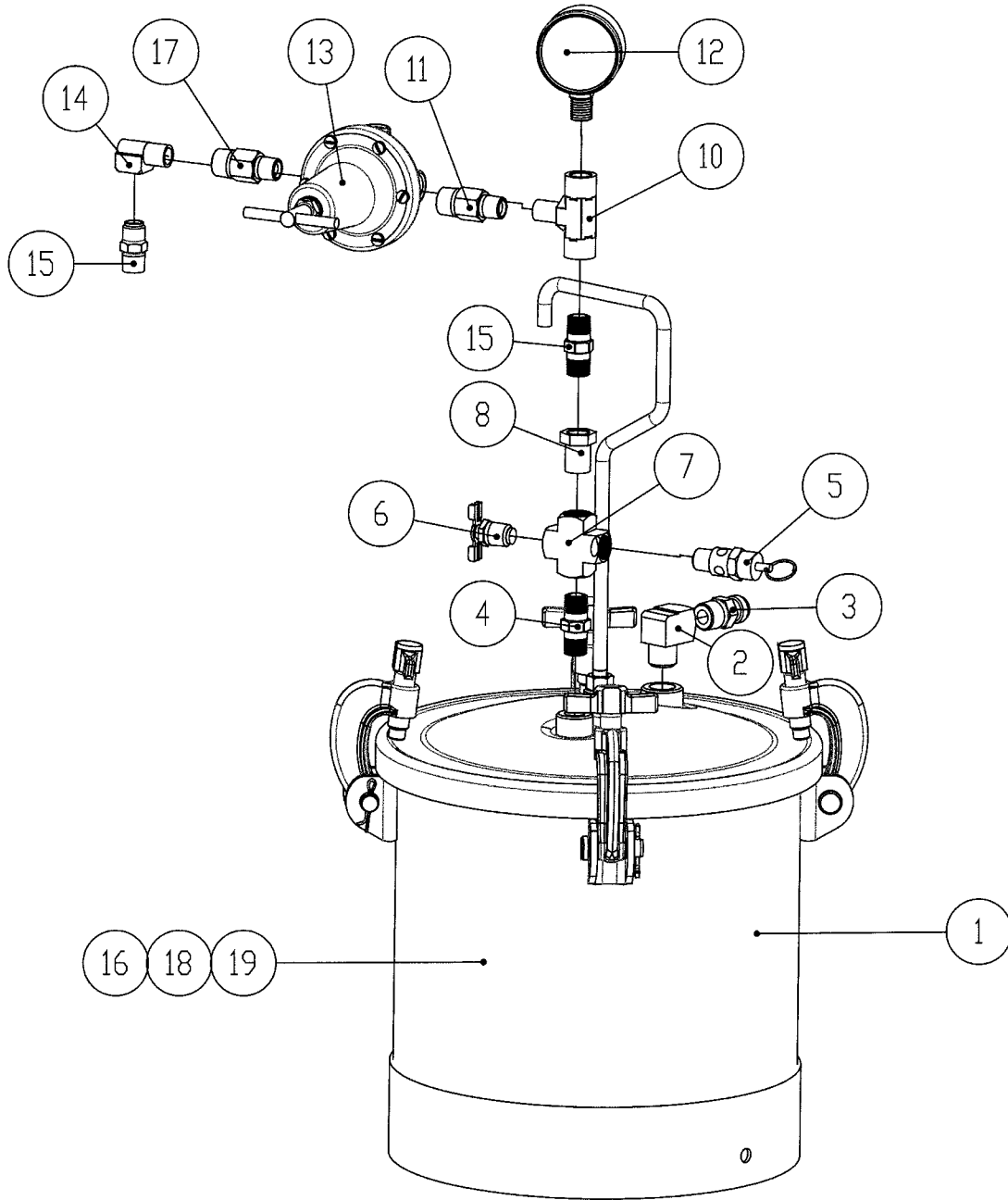


Figure 3: 79281 Pressure Pot Assembly

| 79281 PRESSURE POT ASSEMBLY - PARTS LIST (Figure 3) | | | |
|--|--|---------------|-----------------------------|
| Item # | Description | Part # | Qty |
| 1 | Pressure Pot | 83C-210 | 1 |
| 2 | St. Elbow, 3/8 NPT | SSP-1939 | 1 |
| 3 | Ball Valve, 3/8 NPT(M) x 3/8 NPS(M) | VA-527 | 1 |
| 4 | Nipple, Hex, 1/4 NPT(M) | SSP-462-ZN | 1 |
| 5 | Valve, Safety, 40 PSI | TIA 4040 | 1 |
| 6 | Valve, Drain | SS-2707 | 1 |
| 7 | Cross, 1/4 NPT(F) | SSP-3301-NI | 1 |
| 8 | Adapter, Swivel, 1/4 NPT(M) x 1/4 NPS(F) | SSP-8217-2 | 1 |
| 10 | Male Branch Tee, 1/4 NPT(F) | SSP-2629-ZN | 1 |
| 11 | Bushing, 1/4 NPT(F) x 3/8 NPT(M) | 20-1753-1 | 1 |
| 12 | Gauge, Pressure 0-30 PSI, 2-1/2", 1/4 NPT(M) | 83-1414 | 1 |
| 13 | Regulator, Air 3/8 NPT(F) | HAR-501 | 1 |
| 14 | Elbow, 1/4 NPT(F) | 20-2848 | 1 |
| 15 | Adapter, 1/4 NPT(M) x 1/4 NPS(M) | H-2008 | 1 |
| 16 | Lid | PT-422 | 1 |
| 17 | Nipple, 3/8 NPT(M) x 1/4 NPT(M) | 83-4233 | 1 |
| 18 | Fluid Tube | QMS-9-1 | 1 |
| 19 | Gasket | PT-33-1 | 1 |
| 20 | Tank Liner (Not Shown) | PT-78-K10 | Sold in Packs of 10 & 60 |

WARRANTY POLICIES

LIMITED WARRANTY

Ransburg will replace or repair without charge any part and/or equipment that falls within the specified time (see below) because of faulty workmanship or material, provided that the equipment has been used and maintained in accordance with Ransburg's written safety and operating instructions, and has been used under normal operating conditions. Normal wear items are excluded.

THE USE OF OTHER THAN RANSBURG APPROVED PARTS, VOID ALL WARRANTIES.

SPARE PARTS:

One hundred and eighty (180) days from date of purchase, except for rebuilt parts (any part number ending in "R") for which the warranty period is ninety (90) days.

EQUIPMENT:

When purchased as a complete unit, (i.e., guns, power supplies, control units, etc.), is one (1) year from date of purchase. **WRAPPING THE APPLICATOR IN PLASTIC, SHRINK-WRAP, ETC., WILL VOID THIS WARRANTY.**

RANSBURG'S ONLY OBLIGATION UNDER THIS WARRANTY IS TO REPLACE PARTS THAT HAVE FAILED BECAUSE OF FAULTY WORKMANSHIP OR MATERIALS. THERE ARE NO IMPLIED WARRANTIES NOR WARRANTIES OF EITHER MERCHANT ABILITY OR FITNESS FOR A PARTICULAR PURPOSE. RANSBURG ASSUMES NO LIABILITY FOR INJURY, DAMAGE TO PROPERTY OR FOR CONSEQUENTIAL DAMAGES FOR LOSS OF GOODWILL OR PRODUCTION OR INCOME, WHICH RESULT FROM USE OR MISUSE OF THE EQUIPMENT BY PURCHASER OR OTHERS.

EXCLUSIONS:

If, in Ransburg's opinion the warranty item in question, or other items damaged by this part was improperly installed, operated or maintained, Ransburg will assume no responsibility for repair or replacement of the item or items. The purchaser, therefore will assume all responsibility for any cost of repair or replacement and service related costs if applicable.

MANUAL SUMMARY CHANGE

SI-04-02.8 replaces Service Manual **SI-04-02.7**, with the following changes:

1. New drawing (**Cover**).
2. Added No. 2 Handgun and Power Supply manuals numbers (**Cover**).
3. Changed model number of the Deuce Cart (**Cover**).
4. Update safety information (**Page 2**).
5. New description copy (**Page 6**).
6. Update Note (**Page 6**).
7. Enhanced explanation of power supply bracket assembly (**Page 7**).
8. Add "Operation" section (**Page 8**).
9. New "Parts Identification" drawing (**Page 9**).

Manufacturing

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Fax: 419-470-2233

Technical Support Representative will direct you to the appropriate telephone number for ordering Spare Parts.