Burroughs Sprayer Mfg.®

# Operating Instructions and Typical Parts for Burroughs Sprayers from 55 to 300 Gallon Models

***Manufacturers of Better Farm Equipment***
***"Quality Products and Service Since 1955"***

Si no entiendes inglés, pídele a alguien que te lo traduzca.

***Read, Understand, and Follow the manual.***
***This manual provides information and procedures to safely operate and maintain a typical sprayer.***

# Contents

# 1. General Information

## 1.1 Introduction

Burroughs Sprayer Mfg. would like to thank you, the customer, for purchasing our product. Our company has been manufacturing quality products since our beginning in 1955.

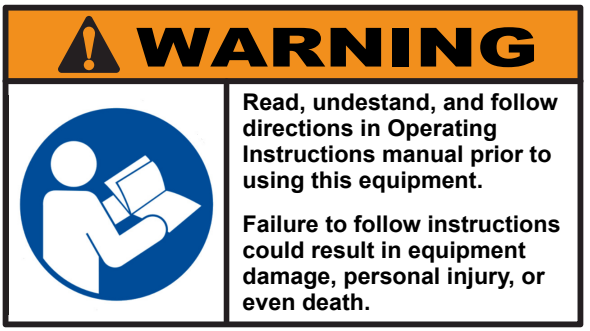
This manual covers the general basics of our sprayer models. For specific information related to the sprayer you purchased, contact the company.

**⚠WARNING** **Read, Understand, and Follow Instructions**

**To avoid personal injury or death, carefully read and understand all instructions pertaining to the sprayer. Do not attempt to use any product without fully understanding all of the instructions and safety recommendations.**

**Do not operate a vehicle or the sprayer unless you read and understand the instructions and warnings in this manual and other related manuals for the tractor.**

**If any doubt or question arises about the correct or safe method of performing anything found in this manual, contact Burroughs Sprayer Mfg. Proper care and operation is your responsibility.**




**Always Think…The Safe Way Is The Best Way**

## 1.2 Authorized Use

**⚠WARNING Failure to comply with the following safety instructions could result in serious injury and possibly even death if they are not understood and followed. Do not use the sprayer to spray unauthorized liquid substances. If in doubt, contact Burroughs Sprayer Mfg.**

The following chemicals must never be sprayed through our sprayer:

- Gasoline (Petrol)
- Kerosene (paraffin)
- Diesel fuel
- Ceramic slurries
- Sewage
- Potable water
- Abrasive fluids

Failure to follow this instruction will void the warranty and could lead to property damage, serious injury, or death.

## 1.3 Customer Service and Parts

For customer service or ordering replacement parts, contact:

Burroughs Sprayer Manufacturing
P.O. Box 776
170 West Dogwood Road
Loris, SC 29569

Email: burrspry@sccoast.net

## 1.4 Serial Number

Before calling with any questions on product information, have the serial number and model number available. This information is on the sprayer and will help us verify your information and serve you best.

In the provided space below, record the serial number, model number, and tank capacity.

| Serial Number Information | |
|---|---|
| **Serial No.** | |
| **Model No.** | |
| **Tank Capacity** | |
| **Purchase Date** | |

# 2. Safety

## 2.1 Safety is Your Responsibility

It is the responsibility of the user to understand and properly use this sprayer and the chemicals being used in the sprayer. Be aware of the inherent dangers in the use of this product and the applied chemicals. Read and understand all Warnings, Cautions, Notices, and Safety Instructions in this manual, on the sprayer, or on the vehicle connected to the sprayer.

Accidents can often be avoided by being alert and recognizing potentially hazardous situations. Anyone operating the sprayer must have the necessary training to operate it properly and safely. The safety information in this manual serves as a basic guide to prevent injury or even death.

Burroughs Sprayer Manufacturing cannot anticipate every possible circumstance that might involve a potential hazard. ***The identification of hazardous situations in this manual, on the product itself, or on the chemicals being used, is therefore, not all-inclusive.*** If procedures or operating techniques that are not specifically mentioned in this manual are used, you must satisfy yourself that they are safe for you and for bystanders. Make sure the sprayer or vehicle it is connected to will not be damaged or made unsafe by any operating method you choose.

DO NOT proceed if any doubt arises about the correct or safe method of performing anything found in this or other related equipment manuals. If in doubt, seek out expert assistance from a qualified person before continuing.

## 2.2 Safety Signal Words

Personal injury hazards are identified by the “Safety Alert Symbol” and followed by a signal word such as WARNING or CAUTION to indicate the severity of the hazard.

This safety alert icon surrounds an image showing a specific type of injury that should be avoided.

**WARNING** **Indicates a potentially hazardous situation that, if not avoided, COULD result in death or serious injury.**

**CAUTION** **Indicates a potentially hazardous situation that, if not avoided, MAY result in injury.**

***NOTICE*** *Indicates that equipment or property damage can result if instructions are not followed.*

***SAFETY INSTRUCTIONS*** **Indicates specific safety-related instructions or procedures.**

***Note***: *Contains additional information important to a procedure.*

## 2.3 Personal Protection Safety

**WARNING** **Failure to comply with the following safety instructions could result in serious injury and possibly even death if they are not understood and followed.**

**Read, Understand, and Follow**
**Read, Understand, and Follow all related product manuals before using this sprayer. Do not allow anyone to operate this equipment who has not been properly trained in its safe operations.**

**Hazardous Substances**
**Use appropriate preventative measures to prevent breathing or ingesting chemicals. The major health threat from chemical ingestion occurs from breathing air-borne particles. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure, and even death. Ingestion will cause gastrointestinal disturbances, including irritation, nausea, and vomiting and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur.**

**In case of ingestion DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Monitor for breathing difficulties.**

**Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.**

**Impaired Operator**
**Do not attempt to operate the sprayer under the influence of drugs or alcohol.**

**Personal Protection Equipment**
**When using this grapple, wear appropriate personal protective equipment. This list may include, but is not limited to:**

- **Protective shoes with slip-resistant soles**
- **Protective eyewear**
- **Protective clothing and gloves**
- **Hearing protection**
- **Respirator (breathing protection)**
  **Respiratory protection is required to avoid inhaling or coming into contact with air-born chemicals. If significant spray or mist will be present, wear a NIOSH approved or equivalent respirator.**

**WARNING** **Hearing Loss Prolonged Exposure To Loud Noise May Cause Permanent Hearing Loss!**

**Working environments with noise-producing equipment can cause partial to permanent hearing loss. We recommend using hearing protection any time noise levels exceed 80 decibels (dB). Noise levels over 85 dB, on a long-term basis, can cause severe hearing loss. Noise levels over 90 dB over a period of time can cause permanent and even total hearing loss.**

**Hearing loss from loud noise is cumulative over a lifetime without hope of natural recovery.**

**CAUTION** **Failure to comply with the following safety instructions may result in serious injury if they are not understood and followed.**

**Do not use the unit as a work platform. Do not stand on top of the unit at any time. Do not allow anyone to ride on or sit on this sprayer.**

**Never operate the sprayer around electrical power lines or cables or during a storm while there is a chance of getting struck by lightning.**

**Do not allow children to play on/around or operate the sprayer equipment.**

**The health of an operator who frequently uses the sprayer should be monitored for exposure to herbicides or pesticides, as recommended by the chemical label or local/ federal regulations.**

**If improperly handled or applied, herbicides and pesticides may be toxic to humans and animals. Always use caution and maintain a safe distance when spraying.**

**Visually inspect the sprayer before use to make sure all parts are in good working condition and operate freely. Have any damaged parts replaced immediately.**

**SAFETY INSTRUCTIONS** **The following safety instructions are provided to help prevent injury or limit equipment damage.**

**Immediately clean up any spilled fluid. To avoid tripping or slipping, do not leave anything lying around the work area.**

**Replace any missing or hard-to-read safety signs or instructional labels. Use care when washing or cleaning the sprayer. No-cost safety signs are available from Burroughs Sprayer Mfg.**

**Have a first aid kit available for use should the need arise and know how to use it.**

**Have a fire extinguisher available should the need arise and know how to use it.**

## 2.4 Chemical Safety

**⚠CAUTION** **Failure to comply with the following safety instructions may result in serious injury if they are not understood and followed.**

**Read, understand, and follow all chemical label instructions on the container and/or applicable Safety Data Sheet (SDS) or Material Safety Data Sheets (MSDS). Pesticides are especially hazardous chemicals which must be handled carefully. Consult your chemical dealer on the proper use and coverage.**

**Avoid inhaling, ingesting, or bodily contact with any chemical. KNOW licensing and regulatory requirements. Read the chemical label before handling or mixing chemicals.**

**Do not mix or pour chemicals in an enclosed or unvented area.**

**To avoid unintended chemical reactions, flush the sprayer with clean water after each use and before filling the tank with a new chemical. Different chemicals may interact dangerously with each other.**

**To prevent unintended exposure, store all pesticides, herbicides, or other chemical substances properly and in a secure location with appropriate labels.**

**Sprayer leaks, bodily chemical contact, poisoning, and spills require immediate response. Avoid inhaling, ingesting, or coming into contact with any chemicals. Familiarize yourself with potential emergency procedures before handling chemicals.**

**Store chemicals in a properly labeled container and in a secure location per the manufacturer's recommendations.**

## 2.5 Installation/Setup Safety

Refer to “5. Setup/Installation” on page 13 for safety recommendations related to connecting the sprayer to the tractor. All applicable safety recommendations in other sections should also be followed.

## 2.6 Operation Safety

Refer to “6. Operation” on page 14 for safety recommendations related to operating the sprayer. All applicable safety recommendations in other sections should also be followed.

## 2.7 Maintenance Safety

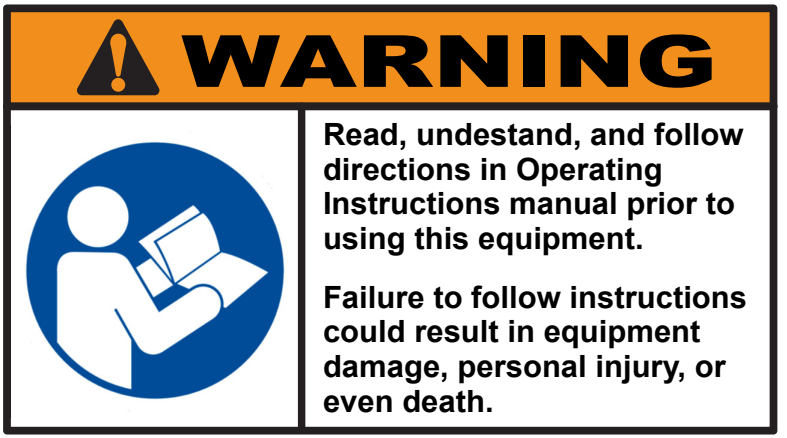
Refer to “11. Troubleshooting” on page 21 for safety recommendations related to maintenance and service of the sprayer. All applicable safety recommendations in other sections should also be followed.

## 3. Safety Signs (Decals)

**SAFETY INSTRUCTIONS** **To prevent personal injury of the end-user from not being aware of safety recommendations, the owner/operator must make sure the following decals are attached to the sprayer and are legible.**

These decals are attached to each sprayer and must be clean, visible, and legible at all times. If these decals are not attached to the sprayer, it is the users' responsibility to replace them in their original location.

For service or ordering replacement safety signs, contact Burroughs Sprayer Mfg.




# 4. Specifications

## 4.1 Miscellaneous Conversion Factors

1 Acre = 43,560 square feet
43.56 1000 ft2 Blocks
0.405 Hectare

1 Hectare = 2.471 Acres

1 GPA = 2.9 fl oz per 1000 ft2
9.35 L/ha

1 GAL per 1000 ft2 = 43.56 GPA

1 Mile = 5,280 ft; 1,610 m
1.61 Kilometers

1 Gallon = 128 fl oz; 8 Pints
4 Quarts; 3.79 Liters
0.83 Imperial Gallon

1 PSI = 0.069 bar
6.896 kilopascals

1 MPH = 1.609 KPH

## 4.2 Suggested Minimum Spray Heights

The nozzle height suggestions in the table below are based on the minimum overlap required to obtain uniform distribution. However, in many cases, typical height adjustments are based on a 1:1 nozzle spacing to height ratio. For example, 110° flat spray tips spaced 20” apart are commonly set 20” above the target.

| Tip | Angle | 20” Spacing | 30” Spacing | 40” Spacing |
|---|---|---|---|---|
| TP, TJ | 65° | 22-24 | 33-35 | NR* |
| TP, XR, TX, DG, TJ, AI, XRC | 80° | 17-19 | 26-28 | NR |
| TP, XR, DG, TT, TTI, TJ, DGTJ, AI, AIXR, AIC, XRC, TTJ, AITTJ, TTI60, APTJ | 110° | 16-18 | 20-22 | NR* |
| FullJet® | 120° | 10-18** | 14-18** | 14-18** |
| FloodJet® TK, TF, K, QCK, QCTF, 1/4TTJ | 120° | 14-16*** | 15-17*** | 18-20*** |
| * Not recommended. | | | | |
| ** Nozzle height based on 30°–45° angle of orientation. | | | | |
| *** Wide-angle spray tip height is influenced by nozzle orientation. The critical factor is to achieve a double spray pattern overlap. | | | | |

# 5. Setup/Installation

## 5.1 Installation Safety

**⚠CAUTION** **Failure to comply with the following safety instructions may result in serious injury if they are not understood and followed.**

**Be thoroughly familiar with all spraying equipment and the operation of this equipment before use. Contact the chemical supplier for specific regulations and requirements covering gloves, chemical masks, clothing, and other accessories that should be worn or used when using chemicals.**

**All safety shields, guards, and chains must be in working order. All warning labels must be in place and readable.**

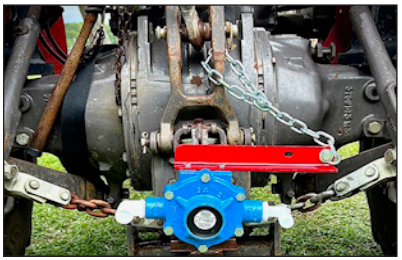
**Due to the added weight, attaching this sprayer may affect the tractor's braking and stability.**

**When spraying manually, it is recommended that chemical-resistant face masks and clothing be worn to prevent any chemicals from coming into contact with the skin or being inhaled.**

**When spraying manually, always spray upwind of yourself as long as the sprayed chemical will not drift into the vicinity of other people.**

## 5.2 Connecting Pump to Tractor

1. For towable models, connect the sprayer to the tractor's hitch with the proper retainer pins and safety chains in order to prevent accidental separation.
2. Attach the torque arm and pump, as shown, to the tractor with the chains provided.



***NOTICE***

*Do not attach the torque arm to any movable linkage.*

3. Connect the pump to the PTO shaft using a Hypro series 1320, 1321, or 1323 coupler. Make sure the PTO safety guard shield is in place.
4. Adjust the tensioning chain while applying pressure to the spring.

# 6. Operation

## 6.1 Operation Safety

**WARNING** **Failure to comply with the following safety instructions could result in serious injury and possibly even death if they are not understood and followed.**

**Be aware of bystanders in the work area. Make sure the area is clear before engaging the PTO drive or moving the sprayer.**


**Do not leave the tractor or sprayer unattended. Make sure the engine of tractor is stopped, transmission is placed in park, key is removed, and parking brake is set.**

**Keep hands and body parts clear of all moving parts, especially the PTO shaft. Do not wear loose-fitting clothing around rotating parts.**

**Be aware of potentially dangerous terrain, such as holes, slopes, banks, drop-offs, rocks, etc. Always operate the tractor up and down slopes and never across.**

**Do not allow riders on the tractor or the sprayer.**

**CAUTION** **Failure to comply with the following safety instructions may result in serious injury if they are not understood and followed.**

**Allow proper clearance for spray boom (if equipped) during turns.**

**Check for any licensing restrictions or regulations concerning the application of the specific chemical being sprayed.**

Only authorized and trained operators, having the knowledge and skill necessary to safely use the sprayer, or tractor should operate the sprayer.

**Do not turn the power ON to the sprayer until ready to spray in order to avoid unintentional spray release.**

**Release all pressure in the system before filling, cleaning, or servicing the sprayer.**

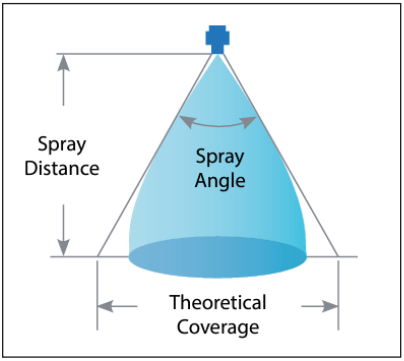
**Do not spray on windy days.**

## 6.2 Operation

1. Refer to sections “4. Specifications” on page 12, “7. Spray Coverage” on page 16, and “13. Replacement Parts” on page 24 to determine the correct nozzle settings, tractor speed, and RPM.
2. Fill the tank half-full with clean water strained through a 100 mesh screen.

   **NOTICE** *Debris in the water will cause pump damage or clog spray tips. Most “well” water contains sand and water from lakes, rivers, or ditches will commonly contain some sand or debris.*
3. Mix the specified amount(s) of chemical(s) to use per gallon of water. Add the remainder of the water for the specified ratio of chemical to water.
4. Open the cut-off valve under the tank.
5. Turn the T-handle on the pressure relief valve counterclockwise 5 or 6 turns in order to set the desired pressure before starting the pump.
6. Start the tractor and set the RPM at the speed determined from Step 5. Pumps operate efficiently at PTO speeds of 540 and 1000 RPM.
7. For boom model sprayers, position the TeeValve Handle to appropriate setting.
   The lever is raised for spraying to start.
   The lever is lowered for spraying to stop. Raise the lever and engage the PTO.
8. With TeeValve lever raised, turn relief valve T-handle clockwise to increase the pressure to the desired setting for spraying.
9. Stop the sprayer when the tank is empty.

# 7. Spray Coverage




This table lists the theoretical coverage of spray patterns as calculated from the included spray angle of the spray and the distance from the nozzle orifice. These values are based on the assumption that the spray angle remains the same throughout the entire spray distance. In actual practice, the tabulated spray angle does not hold for long spray distances.

| INCLUDED SPRAY ANGLE | Theoretical Coverage At Various Spray Heights | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 8” | 10” | 12” | 15” | 18” | 24” | 30” | 36” |
| 15° | 2.1 | 2.6 | 3.2 | 3.9 | 4.7 | 6.3 | 7.9 | 9.5 |
| 20° | 2.8 | 3.5 | 4.2 | 5.3 | 6.4 | 8.5 | 10.6 | 12.7 |
| 25° | 3.5 | 4.4 | 5.3 | 6.6 | 8.0 | 10.6 | 13.3 | 15.9 |
| 30° | 4.3 | 5.4 | 6.4 | 8.1 | 9.7 | 12.8 | 16.1 | 19.3 |
| 35° | 5.0 | 6.3 | 7.6 | 9.5 | 11.3 | 15.5 | 18.9 | 22.7 |
| 40° | 5.8 | 7.3 | 8.7 | 10.9 | 13.1 | 17.5 | 21.8 | 26.2 |
| 45° | 6.6 | 8.3 | 9.9 | 12.4 | 14.9 | 19.9 | 24.8 | 29.8 |
| 50° | 7.5 | 9.3 | 11.2 | 14.0 | 16.8 | 22.4 | 28.0 | 33.6 |
| 55° | 8.3 | 10.3 | 12.5 | 15.6 | 18.7 | 25.0 | 31.2 | 37.5 |
| 60° | 9.2 | 11.5 | 13.8 | 17.3 | 20.6 | 27.7 | 34.6 | 41.6 |
| 65° | 10.2 | 12.7 | 15.3 | 19.2 | 22.9 | 30.5 | 38.2 | 45.8 |
| 73° | 11.8 | 14.8 | 17.8 | 22.0 | 27.0 | 36.0 | 44.0 | 53.0 |
| 80° | 13.4 | 16.8 | 20.2 | 25.2 | 30.3 | 40.3 | 50.4 | 60.4 |
| 85° | 14.7 | 18.3 | 22.0 | 27.5 | 33.0 | 44.0 | 55.4 | 66.4 |
| 90° | 16.0 | 20.0 | 24.0 | 30.0 | 36.0 | 48.0 | 60.0 | 72.0 |
| 95° | 17.5 | 21.8 | 26.2 | 32.8 | 40.3 | 52.4 | 65.5 | 78.6 |
| 100° | 19.1 | 23.8 | 28.6 | 35.8 | 43.0 | 57.2 | 71.6 | 85.9 |
| 110° | 22.8 | 28.5 | 34.3 | 42.8 | 51.4 | 68.5 | 85.6 | 103 |
| 120° | 27.7 | 34.6 | 41.6 | 52.0 | 62.4 | 83.2 | 104 | |
| 130° | 34.3 | 42.9 | 51.5 | 64.4 | 77.3 | 103 | | |
| 140° | 43.8 | 54.8 | 65.7 | 82.2 | 98.6 | | | |
| 150° | 59.6 | 74.5 | 89.5 | | | | | |

# 8. Cleaning and Storage

## 8.1 Cleaning

The increased life of the sprayer and its performance will be extended when the sprayer is properly cleaned after each use to prevent chemical residue from forming in the tank and potentially damaging the pump.

1. After each use, flush the tank and the lines/hoses with a chemical-neutralizing solution.
   a. Fill the tank partially with water and pump the water through the boom assembly and/or spray gun, as equipped.
   b. If a spray gun is part of the sprayer, wash the inside of the tank.
2. Refill the tank half full with water and a chemical-neutralizing solution and repeat the cleaning instructions above.

***SAFETY INSTRUCTIONS*** **Follow the manufacturer's instructions for disposal of all chemicals.**

3. Flush again with clean rinse water.
4. Periodically clean the tank strainer on the end of the intake hose. Remove the nylon swivel nut from the hose, pull out the screen, and flush it with water.
5. If equipped, periodically clean the strainers in the boom nozzles. Remove the nozzle, pull out the screen, and flush it with water.
6. For infrequent use and before long periods of storage:
   a. Remove the suction hose from the tank.
   b. Completely drain the tank, lines, and pump.
   c. Open any drain plugs.
   d. Blow compressed air through the pump and any hoses or lines.
   e. When freezing conditions exist, follow the Winterizing procedure.

## 8.2 Winterizing

Properly winterizing the sprayer is essential to avoid pump and other component damage. Make sure the sprayer is winterized prior to freezing conditions. Failure to follow these instructions can result in component parts failure and will void the warranty.

1. Empty the tank and rinse following the procedure in the Cleaning section.
2. Pour two to four gallons of a 50/50 solution of water and non-toxic RV antifreeze into the tank. Use RV antifreeze as opposed to engine antifreeze to prevent toxic residue in the tank or possible reaction to future chemicals.
3. Start the pump and spray the antifreeze solution through the boom assembly (if equipped), hoses and/or lines, all nozzles, as well as the spray gun, if equipped. Make sure the antifreeze is pumped throughout the entire system.
4. Before spraying for the first time in the spring, flush the sprayer with clean water.

## 8.3 Removal from Storage

1. Test the sprayer with water for leaks before adding chemicals.
2. Inspect for and replace any worn hoses, lines, nozzles, or other components.
3. Inspect the pressure gauge for proper function.

# 9. Towing (Model 300 Only)

The following items are not all-inclusive of the roadway travel which might be experienced. Use the recommendations along with good judgment to prevent accidents or product damage.

1. Review all towing instructions in the tractor's OEM manual.
2. All safety signs and slow moving vehicle (SMV) signs must be mounted to the sprayer and visible.
3. Securely attach the sprayer to the tractor's hitch.
4. The filled tank of the sprayer will increase the normal stopping distance. Travel slowly and allow extra time and distance to stop.
5. Place the booms in their transport position before traveling roads.
6. Make sure the sprayer's tires are fully inflated and in good condition.
7. Avoid sharp turns, sudden starts or stops, that could result in loss of control.
8. (ROPS) if you will be operating on non-level terrain.
9. Never allow riders on the tractor of the sprayer trailer.
10. Never tow the sprayer while under the influence of alcohol, drugs, or medication.
11. Comply with all local, State, and Federal laws and regulations. The owner is responsible for obtaining licensing, trailer lights, safety chains, or signage required to comply with the law.

# 10. Maintenance

## 10.1 Maintenance Safety

**CAUTION** **Failure to comply with the following safety instructions may result in serious injury if they are not understood and followed.**

**Do not attempt to install replacement parts under the influence of drugs or alcohol.**


**Do not leave the tractor or sprayer unattended. Make sure the engine of tractor is stopped, transmission is placed in park, key is removed, and parking brake is set before installing, adjusting, removing, servicing the sprayer or the pump.**

**Release all pressure in the system before servicing the sprayer.**

**Visually inspect the sprayer before use to make sure all parts are in good working condition and operate freely. Have any damaged parts replaced immediately.**

**Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts.**


**Where replacement parts are necessary for periodic maintenance and servicing, genuine factory replacement parts must be used to restore the unit to original specifications. The manufacturer will not accept responsibility for damages as a result of the use of unapproved parts.**

**Do not use the sprayer if any parts are damaged. If the sprayer is believed to have a defect which could cause it to work improperly, immediately stop using it and remedy the problem before continuing.**

## 10.2 Repair Welding

**Repair welding must be done with care and with procedures that may be beyond the capabilities of the ordinary welder. Before performing any type of welding repair to the seed tender, contact Meridian for approval.**

### 10.3 Maintenance Procedures

Following these routine maintenance procedures will ensure your sprayer operates at peak efficiency throughout its lifetime.

1. Inspect the sprayer for worn parts, loose bolts, worn hose/lines, or other visible damage. Repair any damage before using the sprayer.
2. Periodically inspect the tank straps and tighten the bolts if needed.
3. Follow the recommendations in the Cleaning section.
4. Check the pump for decreased output or leaks. Replace if necessary.

## 11. Troubleshooting

The troubleshooting chart was developed to help when an unsatisfactory sprayer operation occurs. First, identify the “Symptom” that best applies, then check the “Possible Causes” and finally perform the recommended “Remedy”.

If the possible cause or remedy cannot be determined, consult your authorized dealer.

| Spraying Operation | | |
|---|---|---|
| **Symptom** | **Possible Cause** | **Remedy** |
| Pressure gauge does not read pressure. | Debris in inlet port. | Check gauge and clean if possible. |
| | Broken gauge. | Replace. |
| Good pressure “cut-off”, no pressure “cut-on”. | Intake hose has soft inside. | Replace hose. |
| | Crimp in hose. | Replace hose. |
| | Clogged strainer. | Clean or replace strainer. |
| | Debris is covering outlet fitting inside tank. | Clean tank, check outlet hole for debris. Clean fittings. |
| Pumps water but has no pressure. | Defective relief valve spring. | Repair with relief valve spring kit or Replace relief valve. |
| | Defective pressure gauge. | Replace gauge. |
| | Defective agitator in tank. | Replace agitator. |
| Pressure cannot be changed. | Defective relief valve spring. | Repair with relief valve spring kit or replace. |
| | Defective pressure gauge. | Replace pressure gauge. |

| Spraying Operation | | |
|---|---|---|
| No pressure. | Defective relief valve. | Repair or replace relief valve. |
| | Defective pressure gauge. | Replace pressure gauge. |
| | Defective agitator in tank. | Replace agitator in tank. |
| | Defective pump. | Repair or replace pump. |
| Booms sprays when cut off. | Damaged control valve. | Repair or replace control valve. |
| | Debris inside control valve. | Clean out trash. |
| Water leaking from shaft end of pump. | Defective seals. | Replace seals. Check bearings and replace if needed. |
| Water leaking from T-valve. | Damaged packing glands. | Repair valve with repair kit or replace valve. |
| Water leaking from large tank fitting nut. | Worn O-ring/gasket. | Replace O-ring/gasket. |
| | Inspect tank for cracks. | Repair or replace as necessary. |
| Sprayer has good pressure but won't spray. | Intake line clogged. | Clean hoses and tank. |
| | Strainer clogged inside tank. | Clean strainer. |
| | T-valve lever is in "OFF" position. | Place T-valve lever on "ON" position. |
| Pump does not prime | Leak in suction line. | Check hose and fittings for leaks and correct. |
| | Obstruction in suction line. | Inspect hose for obstructions and remove. |
| | Suction hose stuck to tank. | Cut a notch or "V" in end of suction hose. |
| | Clogged strainer. | Check strainer and clean regularly. |
| Low discharge | Pump rotates incorrectly. | Correct rotation of pump. |
| | Blocked suction hose. | Inspect suction hose and repair as necessary. |
| | Pump worn. | Replace pump. |
| Pump will not turn | Impeller plugged. | Inspect and clear obstruction. |

# 12. Warranty

Burroughs Sprayer Mfg. warrants each new Burroughs product to be free from defects in material and workmanship. This warranty is applicable only for the normal service life expectancy of the machine or components to not exceed three consecutive months from the date of delivery of the new Burroughs product to the original purchaser.

Under no circumstance will it cover any merchandise or components thereof which, in the opinion of the company, has been subjected to negligent handling, misuse, alteration, an accident, or if repairs have been made with parts other than those obtainable through Burroughs Spraying Mfg.

The company in no way warrants engines, batteries, tires or other trade accessories since these items are warranted separately by their respective manufacturers.

Our obligation under this warranty shall be limited to repairing or replacing, free of charge to the original purchaser, any part that in our judgment shall show evidence of such defect, provided further that such part shall be returned within thirty (30) days from date of failure to Burroughs Sprayer Mfg. through the dealer and distributor to whom the purchase was made, transportation charges prepaid.

This warranty shall not be interpreted to render us liable for injury or damages of any kind or nature, direct, consequential, or contingent, to person or property. This warranty does not extend to loss of crops, loss because of delay in harvesting, or any expense or loss incurred for labor, supplies, substitute machinery, rental or for any other reason.

THERE ARE NO WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE INTENDED FOR FITNESS OR ANY OTHER REASON.

This warranty is subject to any existing conditions of supply which may directly affect our ability to obtain materials or manufacture replacement parts.

Burroughs Sprayer Mfg. reserves the right to make improvements in design or changes in specifications at any time, without incurring any obligations to owners of units previously sold.

No one is authorized to alter, modify, or enlarge this warranty nor the exclusions, limitations and reservations.

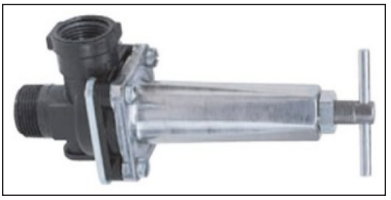
# 13. Replacement Parts

## 13.1 System Components

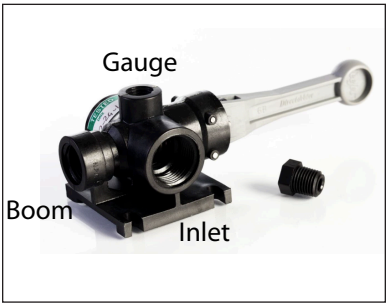
| Series 6500C (6-Roller Pump) | |
|---|---|
| Max. Flow Rate | 22 GPM |
| Max. Pressure | 300 PSI |
| Max. RPM | 1200 RPM |
| Ports | 3/4” NPT Inlet and Outlet (1” hose barb included) |
| Shaft | 5/8” dia. (solid) |
| Continual Operation | 100 to 150 PSI |
| Intermittent Operation | 300 PSI |
| Sprayer Models | AG-55, 65 |

| Series 7560C (8-Roller Pump) | |
|---|---|
| Max. Flow Rate | 22 GPM |
| Max. Pressure | 300 PSI |
| Max. RPM | 1000 RPM |
| Ports | 3/4” NPT Inlet and Outlet (1” hose barb included) |
| Shaft | 15/16” dia. (solid) |
| Continual Operation | 100 to 150 PSI |
| Intermittent Operation | 300 PSI |
| Sprayer Models | BJ-110, 110, 200, 300 |

| Series 7560XL (8-Roller Pump) | |
|---|---|
| Max. Flow Rate | 22.5 GPM |
| Max. Pressure | 300 PSI |
| Max RPM | 1000 RPM |
| Ports | 3/4” NPT Inlet and Outlet (1” hose barb included) |
| Shaft | 15/16” dia. (solid) |
| Continual Operation | 100 PSI |
| Intermittent Operation | 300 PSI |
| Sprayer Model | APE-110 |

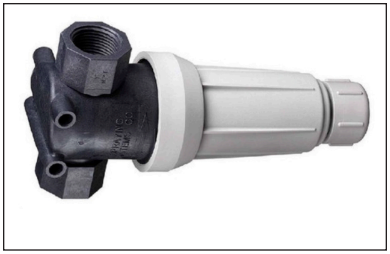


| 8460-3/4-300 Diaphragm-Type Pressure Relief/Regulating Valves | |
|---|---|
| Pressure Range | 300 PSI |
| Flow rate | 70 GPM for 3/4″ |
| Sprayer Model(s) | |



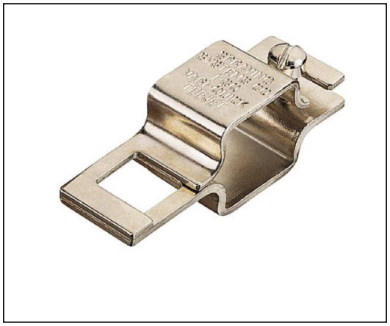

| AA6B Manual Control Valve | |
|---|---|
| Max. Flow Rate | 12 GPM at 5 PSI |
| Max. Pressure | 150 PSI |
| Ports<br>Pressure<br>Gauge<br>Inlet<br>Boom | <br>1/4” NPT<br>3/4” NPT<br>1/2” NPT |
| Sprayer Model(s) | |

| AA17L TeeValve Control Valve | |
|---|---|
| Max. Pressure | 300 PSI |
| Ports<br>Inlet<br>Accessory<br>Outlet<br>Boom Outlet | <br>3/4” NPT<br>3/4” NPT<br>3/4” NPT |
| Sprayer Model(s) | |



| AA(B)126ML-3 Flush Out Line Strainer | |
|---|---|
| Flow Rate | 23 GPM with 5 PSI pressure drop |
| Ports | 3/4” NPT |
| Screen (replacement) | CP16903-6SSPP (100 Mesh) |
| Sprayer Model(s) | |

| Piston-Type Pressure Relief/Regulating Valves | |
|---|---|
| Max. Pressure | 150 PSI |
| Ports<br>Inlet<br>Outlet | <br>3/4” NPT<br>3/4” NPT |
| Sprayer Model(s) | |
| (B)23120-3/4-PP with 302 Stainless Steel Spring and EPDM O-ring | |
| (B)23120A-3/4-PP with 316SS Spring and FKM O-ring | |



| Vari-Spacing Square Clamps | | |
|---|---|---|
| Plated Steel | Stainless Steel | To Fit |
| QJ111SQ-3/4 | QJ111SQ-3/4-304SS | 3/4” |
| QJ111SQ-1 | QJ111SQ-1-304SS | 1” |
| QJ111SQ-1-1/4 | QJ111SQ-1-1/4-304SS | 1-1/4” |
| QJ111SQ-1-1/2 | QJ111SQ-1-1/2-304SS | 1-1/2” |

| Vari-Spacing Round Clamps | |
|---|---|
| Plated Steel | To Fit |
| QJ111-1/2 | 1/2” Pipe (13/16” & 7/8” O.D. Tubings) |
| QJ111-3/4 | 3/4” Pipe (1” & 1-1/16” O.D. Tubings) |
| QJ111-1 | 1” Pipe (1-1/8”, 1-1/4” & 1-3/8” O.D. Tubings) |
| QJ111-1-1/4 | 1-1/4” Pipe (1-9/16” & 1-11/16” O.D. Tubings) |
| QJ111HP-3/4 | 3/4” Pipe (1” & 1-1/16” O.D. Tubings) |

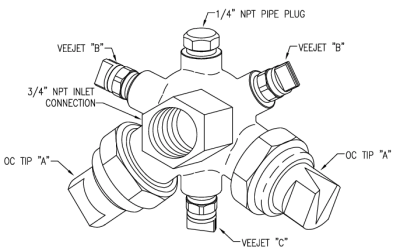
| Hose Barb Single | |
|---|---|
| 18635-111-406-NYB | 3/8” |
| 18638-111-540-NYB | 1/2” |
| 18719-111-785-NYB | 3/4” |

| Hose Barb Double | |
|---|---|
| 18636-112-406-NYB | 3/8” |
| 18639-112-540-NYB | 1/2” |
| 18720-112-785-NYB | 3/4” |

| Hose Barb Triple | |
|---|---|
| 18637-113-406-NYB | 3/8” |
| 18640-113-540-NYB | 1/2” |
| 18721-113-785-NYB | 3/4” |

| Hose Barb Single | |
|---|---|
| 22251-311-375-NYB | 3/8” |
| 22251-311-500-NYB | 1/2” |
| 22251-311-750-NYB | 3/4” |

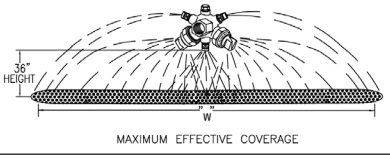
| Hose Barb Double | |
|---|---|
| 22252-312-375-NYB | 3/8” |
| 22252-312-500-NYB | 1/2” |
| 22252-312-750-NYB | 3/4” |




| 5880-3/4-2TOC20 Boomless Nozzles With Extra-Wide Flat Spray Projection | |
|---|---|
| OC Tip “A” | OC-20 |
| VEEJET “B” | H1/4U-0520HE |
| VEEJET “C” | H1/4W-9506 with 50 mesh strainer |
| Sprayer Model(s) | |

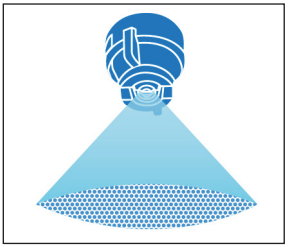
| | | | Gallons per Acre (GPA) | | | | | Turf Applications Gallons per 1,000 sq.ft. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PSI | GPM | “W” feet | 4 MPH | 5 MPH | 7.5 MPH | 10 MPH | 15 MPH | 2 MPH | 3 MPH | 4 MPH | 5 MPH |
| 20 | 6.08 | 47 | 16.0 | 12.8 | 8.5 | 6.4 | 4.3 | 0.73 | 0.49 | 0.37 | 0.29 |
| 30 | 7.45 | 50 | 18.4 | 14.8 | 9.8 | 7.4 | 4.9 | 0.84 | 0.56 | 0.42 | 0.34 |
| 40 | 8.60 | 52 | 20 | 16.4 | 10.9 | 8.2 | 5.5 | 0.94 | 0.62 | 0.47 | 0.37 |

W = Maximum effective coverage with nozzle mounted at 36” height.



## 13.2 Spray Nozzles

### XRC-11004 Extended Range Flat Spray (TeeJet)



| ANGLE | 20" SPACING HEIGHT |
|---|---|
| 80° | 30" |
| 110° | 20" |

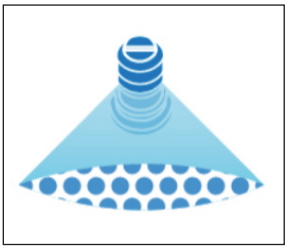
| PSI | GPM[1] | GPM[2] | Gallons per Acre (GPA) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 4 MPH | 5 MPH | 6 MPH | 8 MPH | 10 MPH | 12 MPH | 15 MPH | 20 MPH |
| 15 | 0.24 | 31 | 17.8 | 14.3 | 11.9 | 8.9 | 7.1 | 5.9 | 4.8 | 3.6 |
| 20 | 0.28 | 36 | 21 | 16.6 | 13.9 | 10.4 | 8.3 | 6.9 | 5.5 | 4.2 |
| 30 | 0.35 | 45 | 26 | 21 | 17.3 | 13.0 | 10.4 | 8.7 | 6.9 | 5.2 |
| 40 | 0.40 | 51 | 30 | 24 | 19.8 | 14.9 | 11.9 | 9.9 | 7.9 | 5.9 |
| 50 | 0.45 | 58 | 33 | 27 | 22 | 16.7 | 13.4 | 11.1 | 8.9 | 6.7 |
| 60 | 0.49 | 63 | 36 | 29 | 24 | 18.2 | 14.6 | 12.1 | 9.7 | 7.3 |

GPM[1] = Capacity One Tip In Gpm
GPM[2] = Capacity One Tip In Oz/Min

| PSI | GPM[1] | GPM[2] | Turf Applications Gallons per 1,000 sq.ft. | | | |
|---|---|---|---|---|---|---|
| | | | 2 MPH | 3 MPH | 4 MPH | 5 MPH |
| 15 | 0.24 | 31 | 0.82 | 0.54 | 0.41 | 0.33 |
| 20 | 0.28 | 36 | 0.38 | 0.56 | 0.42 | 0.34 |
| 30 | 0.35 | 45 | 0.48 | 0.62 | 0.47 | 0.37 |
| 40 | 0.40 | 51 | 1.4 | 0.91 | 0.68 | 0.54 |
| 50 | 0.45 | 58 | 1.5 | 1.0 | 0.77 | 0.61 |
| 60 | 0.49 | 63 | 1.7 | 1.1 | 0.83 | 0.67 |

GPM[1] = Capacity One Tip In Gpm
GPM[1] = Capacity One Tip In Oz/Min

## TF-VS4 Wide Angle Flat Spray (Turbo FloodJet)



| HEIGHT | SPACING |
|---|---|
| 24"* | 20" |
| 30"* | 30" |
| 39"* | 40" |

| PSI | GPM[1] | GPM[2] | Gallons per Acre (GPA) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 4 MPH | 5 MPH | 6 MPH | 8 MPH | 10 MPH | 12 MPH | 15 MPH | 20 MPH |
| 10 | 0.40 | 51 | 14.9 | 11.9 | 9.9 | 7.4 | 5.9 | 5.0 | 4.0 | 3.0 |
| 20 | 0.57 | 73 | 21 | 16.9 | 14.1 | 10.6 | 8.5 | 7.1 | 5.6 | 4.2 |
| 30 | 0.69 | 88 | 26 | 20 | 17.1 | 12.8 | 10.2 | 8.5 | 6.8 | 5.1 |
| 40 | 0.80 | 102 | 30 | 24 | 19.8 | 14.9 | 11.9 | 9.9 | 7.9 | 5.9 |

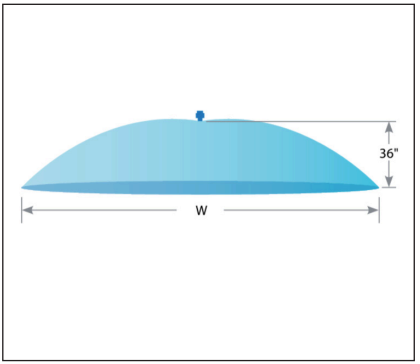
GPM[1] = Capacity One Tip In Gpm
GPM[2] = Capacity One Tip In Oz/Min

| PSI | GPM[1] | GPM[2] | Turf Applications Gallons per 1,000 sq.ft. | | | |
|---|---|---|---|---|---|---|
| | | | 2 MPH | 3 MPH | 4 MPH | 5 MPH |
| 10 | 0.40 | 51 | 1.4 | 0.91 | 0.68 | 0.54 |
| 20 | 0.57 | 73 | 1.9 | 1.3 | 0.97 | 0.78 |
| 30 | 0.69 | 88 | 2.3 | 1.6 | 1.2 | 0.94 |
| 40 | 0.80 | 102 | 2.7 | 1.8 | 1.4 | 1.1 |

GPM[1] = Capacity One Tip In Gpm
GPM[1] = Capacity One Tip In Oz/Min


This adapter provides easy change-over from high-capacity to low-capacity nozzles. CP1325-SS Stainless Steel Cap with QCT Cam Lever Coupling Adapter

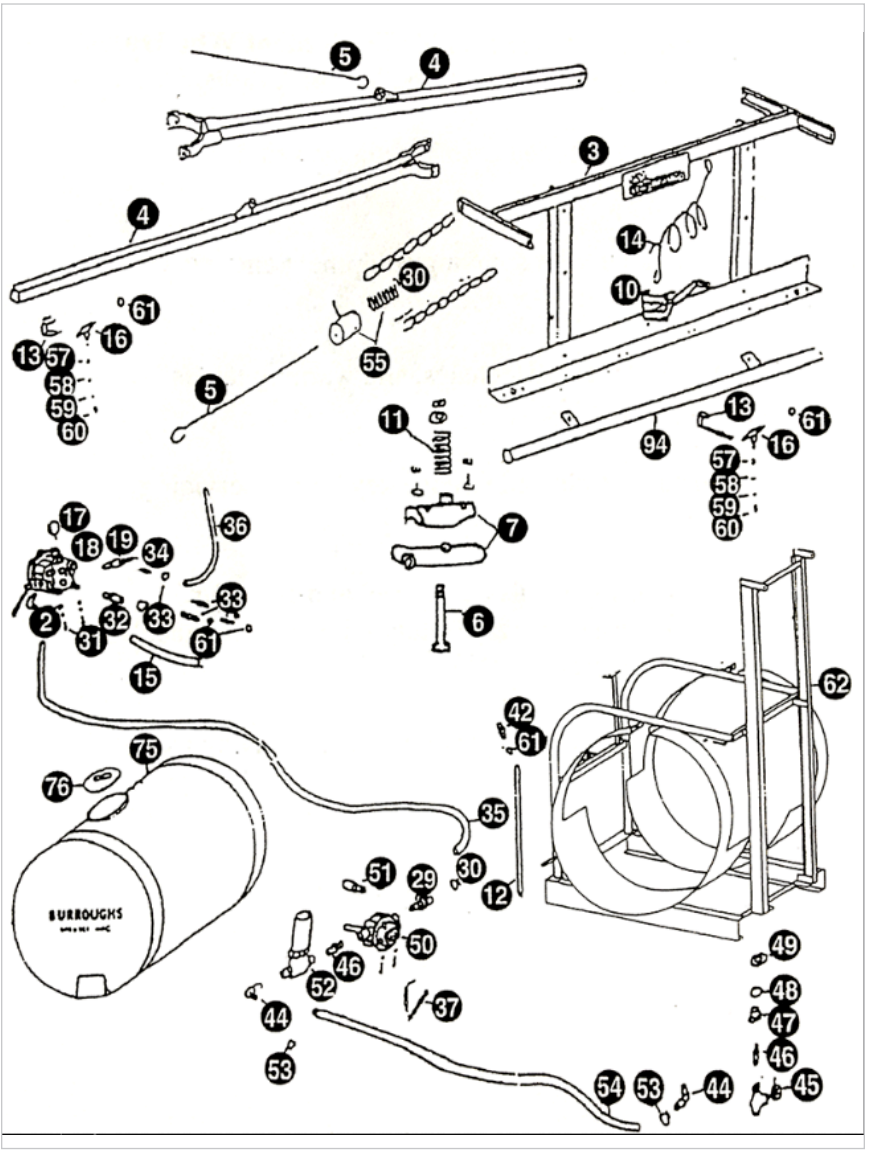
## 1/4-KLC-18 Boomless Nozzles with Extra-Wide Flat Spray Projection (FieldJet)




| PSI | GPM | "W" feet | Gallons per Acre (GPA) | | | | Turf Applications Gallons per 1,000 sq.ft. | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 4 MPH | 5 MPH | 7.5 MPH | 10 MPH | 2 MPH | 3 MPH | 4 MPH | 5 MPH |
| 20 | 2.55 | 20 | 21 | 15.8 | 12.6 | 7.9 | 0.48 | 0.36 | 0.29 | 0.18 |
| 30 | 3.12 | 21 | 25 | 18.4 | 14.7 | 9.2 | 0.56 | 0.42 | 0.34 | 0.21 |
| 40 | 3.60 | 22 | 27 | 20 | 16.2 | 10.1 | 0.62 | 0.46 | 0.37 | 0.23 |

W = Maximum effective coverage with nozzle mounted at 36" height.

## 13.3 Typical Parts



| Item | Description |
|---|---|
| 2 | 3/4” x 3/4” E11 Adapter Nylon |
| 3 | Cross Frame |
| 4 | Left or Right Spray Booms |
| 5 | Hook for Boom |
| 6 | Bolt |
| 7 | Casting Boom Hinges |
| 10 | Hand Winch |
| 11 | Boom Spring |
| 12 | Adj. Pipe - For Mixer |
| 13 | QJ-111-1-1/2 Sq Brackets |
| 14 | Cable |
| 15 | 3/8” I.D. Rubber Hose |
| 16 | QJ 3/8 Nylon Nozzles-Single Double |
| 17 | SG-200 Pressure Gauge<br>GG-200 Pressure Gauge (liquid fill) |
| 18 | AA 17-L Control |
| 19 | 8460- 3/4 Nylon Relief Valve |
| 29 | 3/4” x 3/4” Nylon Adapter |
| 30 | #12 Hose Clamp |
| 31 | 5/16” x 1” Bolt and Nut |
| 32 | 3/4” x 3/8” Adapter |
| 33 | 3/4” x 3/8” Adapter |
| 34 | 3/4” x 3/4” Adapter |
| 35 | 3/4” Hose I.D. |
| 36 | 3/4” Clear Hose I.D. |
| 37 | Chain |
| 42 | Rigid Female NPT 1/4” x 3/8” |
| 44 | 3/4” X 1” ELL Adapter |
| 45 | 1” Banjo Cut Off Valve |
| 46 | 1” X 1-1/14” Reduce Nipple |
| 47 | 1-1/4” Tank Fitting |
| 48 | Gasket |
| 49 | Nut |
| 50 | 6500C Hypro Pump, 6 roller, pump, up to 21.8 gpm (82.5 lpm), and 300 psi (20.7 bar). |
| | C7560 Hypro Pump |

| Item | Description |
|---|---|
| 51 | Standard Pump Adapter |
| 52 | 3/4” Line Strainer (LST075-50 or LST100-50) |
| 53 | #16 Hose Clamp |
| 54 | 1” Hose I.D. |
| 55 | Spring With Chain and Metal Holder |
| 57 | Slotted Strainer |
| 58 | 25 Core |
| 59 | D-3 Disc |
| 60 | QJ Cap & Gasket |
| 61 | 6203 Hose Clamp |
| 62 | 110 Gallon Frame |
| 75 | 110 Gallon Tank |
| 76 | 10” Lid |
| 94 | 5th Middle Row |

# NOTES

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**843-756-4200**

Burroughs Sprayer Mfg.®