For SW Series Sweeper Models:

- SW-4815
- SW-4820
- SW-4825

Sweeper Dual Control

Automatic Sweeper Switching System

INSTRUCTION AND OPERATION MANUAL
Maguire Products Inc.

Sweeper Dual Control System
Gaylord Sweeper Evacuation System
For Models: SW-4815, SW-4820, SW-4825

Table of Contents

Sweeper Dual Control System Basic Operation ___________________ 5

Sweeper Dual Control System Setup ____________________________ 6

Sweeper Dual Control System Operation ________________________ 9

Sweeper Diagrams __________________________________________ 12

Sweeper Dual Control Wiring Diagram _________________________ 14

Warranty __________________________________________________ 15

Technical Support and Contact Information _____________________ 16
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To every person concerned with use and maintenance of the Maguire Sweeper Dual Control System it is recommended to read thoroughly these operating instructions. Maguire Products Inc. accepts no responsibility or liability for damage or malfunction of the equipment arising from non-observance of these operating instructions.

To avoid errors and to ensure trouble-free operation, it is essential that these operating instructions are read and understood by all personnel who are to use the equipment.

Should you have problems or difficulties with the equipment, please contact Maguire Products Inc. or your local Maguire distributor.

These operating instructions only apply to the equipment described within this manual.

Manufacturer’s Contact Information

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Maguire Sweeper Dual Control System

The Maguire Sweeper Dual Control System uses two Maguire SW Series Sweepers interconnected using a centrally located diverter control valve. The material flow is isolated to one gaylord at a time, and then automatically detects when a Maguire SW Sweeper has reached near the bottom of a gaylord of material. When the bottom is reached and material is nearly depleted, the Dual Control System will automatically switch to a second SW Sweeper over a gaylord of material enabling the operator to replace the emptied gaylord without disruption.

The Maguire Sweeper Dual Control System has a built in function allowing the operator to set a delay count in loader cycles before switching to the alternate sweeper. This allows the sweeper to evacuate the optimal amount of material without running dry, and then automatically switch sweepers and load from a new gaylord. In the event that material is not available in the second gaylord, the Sweeper Dual Control System will alarm, alerting the operator.

For models SW-4815, SW-4820 and SW-4825
SWEEPER DUAL CONTROL SYSTEM SET-UP

The Sweeper Dual Control kit consists of the following:

- Control Box Assembly
- Diverter Valve Assembly
- 2 lengths of 2 ½” Tigerflex hose, 39” for Sweeper #1, 45” for Sweeper #2
- 4 – Tigerflex hose clamps
- 2 – sensors with installation hardware
- 2 – sensor mounting brackets and hardware
- 14 adhesive backed mounts and wire ties

FIRST STEP – Position the Stands

The Sweeper Dual Control is designed to attach two SW Sweepers together side by side. The Control Box Assembly and the Diverter Valve Assembly will be bolted to the two SW Sweeper frames using the existing Sweeper stand button-head cap screws located at the top of the stand legs. The Control Box Assembly will be attached to the open side of the frame (front-side), the same side that the gaylord enters. The Diverter Valve Assembly will be attached to the back-side of the frames, same side that the vacuum convey lines are located.

1. Position the two SW Sweepers side-by-side with the open side of the frames on the same side. Separate the frames so that the top of the sweeper frames are 2 inches apart.

SECOND STEP – Install Control Assembly

2. On the front side of the frame, remove the four bolts that hold the top of the legs to the top frame. DO NOT remove the rear bolts at this time.

3. Slide the control panel down between the legs of both sweepers and the AGS Stand Frame Tops.

4. Re-install the four socket-head cap screws.

5. Relocate the drive assembly lifting chain to the front panel.
THIRD STEP – Install Diverter Valve Assembly

6. Locate the backside of the sweeper frames.

7. Remove the four bolts that hold the top of the legs to the AGS Stand Frame Top. Remove the bolt that retains the lifting chain to the leg (if this has not been done already in step 2 above).

8. Slide the Diverter Valve Assembly down between the legs of both sweepers and the AGS Stand Frame Tops.

9. Re-install the four button-head cap screws.

10. Leave the drive assembly lifting chain disconnected for now. The lifting chain will be relocated to the front control panel. (see photo on page 6).

FOURTH STEP – Install Counter-weight Sensors

11. Locate the pre-drilled holes on top of the counter-weight covers of each Sweeper. The Sensor Bracket should be pre-installed on the center set of pre-drill holes. (Note: The sensor height location can be adjusted to trigger earlier or later in the material consumption).

12. Install the Sweeper #1 sensor (sensor wire located on left side of control panel) onto the sensor bracket of the #1 Sweeper located to the left of the control panel. Adjust sensor distance from counter-weights so that the weight does not come into contact with the sensor at any time. Push the counterweight towards sensor to check clearance.

13. Install the Sweeper #2 sensor (sensor wire located on right side of control panel) onto the sensor bracket of the #2 Sweeper located to the right of the control panel. Adjust sensor distance from counter-weights so that the weight does not come into contact with the sensor at any time. Push the counterweight towards sensor to check clearance.

14. Using the supplied self-adhesive wire-ties, secure the sensor wires to the counter-weight guard (4 per cover), and to the stand frame leading up to the control box.
FIFTH STEP – Install Connections

Vacuum Convey Hoses

15. Install the two (2) supplied 2½” Tigerflex hoses to the two Diverter Valve Assembly inlets that opposite the air cylinders using the supplied Tigerflex hose clamps (See illustrations to the right). The opposite end of each 2½” Tigerflex hose will attach to the Sweeper on that side of the Diverter Valve Assembly. Attached your loader’s material convey line to the bottom outlet tube. The 39” section of Tigerflex hose connects to Sweeper #1. The 45” section of Tigerflex hose connects to Sweeper #2.

IMPORTANT: Check the vertical movement clearance between the Sweeper’s section of Tigerflex Hose on the carriage assembly and the sensor on each Sweeper. Make certain that this hose does not make contact with the sensor when the Drive Motor Carriage Assembly is elevated. If necessary, adjust the Tigerflex hose by loosening the clamp and rotating the hose on the Drive Motor Carriage.

Install Air Supply Line

16. Attach an air hose to the air inlet located at the top of the Diverter Valve Assembly. 80 psi air supply must be free of oil and moisture.

Connect Control Box

17. Attach the Control Box Assembly cable to the Diverter Valve Assembly cable.

18. Connect to 110V power.
Sensor Adjustment

19. To adjust the sensor, please refer to the supplied Capacitive Sensor Installation and Adjustment Guide.

Sweeper Dual Control Operation and Control Panel

The Sweeper Dual Control System is designed to operate independently of the Sweepers. The Sweeper Dual Control System detects when a low material level is reached and automatically switches a second Sweeper that is ready with material.

Below is a brief description of the control panel:

<table>
<thead>
<tr>
<th>#1</th>
<th>#2</th>
<th>LED lights indicating which sweeper is currently active.</th>
</tr>
</thead>
<tbody>
<tr>
<td>COUNT</td>
<td></td>
<td>Count is a countdown of loader cycles detected by a vacuum switch before the Sweeper Dual Control System switches sweepers. The COUNT LED light indicating that the count is active and currently counting down.</td>
</tr>
<tr>
<td>CHG SWEEP</td>
<td></td>
<td>Green button to manually change sweepers. Changing sweepers deactivates count.</td>
</tr>
<tr>
<td>SET COUNT</td>
<td></td>
<td>Black button to set the count (0-20).</td>
</tr>
<tr>
<td>SILENCE ALARM</td>
<td></td>
<td>Yellow button to silence the alarm beeper and turns off the strobe light.</td>
</tr>
<tr>
<td>SWEEPER #1</td>
<td></td>
<td>Toggle button to turn on/off control to Sweeper #1. Powers on/off #1 level sensor).</td>
</tr>
<tr>
<td>SWEEPER #2</td>
<td></td>
<td>Toggle button to turn on/off control to Sweeper #2. Powers on/off #2 level sensor.</td>
</tr>
</tbody>
</table>
Count Function – The operator can optionally set a count of loader cycles (detected by a vacuum switch). When the count is set to a value of 1-20 and a sensor is activated on the operating sweeper, the Dual Control System will delay switching to the next sweeper until the count elapses. This function allows the sweeper to evacuate remaining material within the gaylord and also allows time for the operator to respond to a potential alarm condition where the second sweeper may not have material ready.

Alarm Condition – When the sensor of the operating sweeper becomes active (gaylord is nearing empty and sensor is covered by the counter-weight), the system will look at the other sweeper sensor. If the other sweeper sensor is also active (material not present), the alarm will sound and the strobe will blink, alerting the operator that material is not present in the second sweeper. The alarm condition will be active until the Silence Alarm button silences it or the sensor on the second sweeper is deactivated (uncovered) indicating material is present. If the SWEEPER #1 or #2 toggle buttons are in the off position, when it becomes time to switch to that sweeper, the alarm will also sound.

Basic Operation of the Sweeper Dual Control System

1. Turn ON both Sweeper toggle switches (SWEEPER #1, SWEEPER #2)

2. If a delay is desired before switching sweepers a Count of loader vacuum cycles can be set by pressing the SET COUNT button to set or change the number of vacuum cycles. If a count is not desired, set this value to zero (0).

3. Using the CHG SWEEP button (Change Sweeper) switch the Sweeper Dual Control System to a gaylord containing material. LED #1 or #2 will light on the control panel indicating which sweeper will be in operation.
4. When material has been depleted and the counter-weight sensor is activated the following will occur:

If a count has been set to a value other than zero (0), the Dual Control System will begin the countdown of vacuum cycles and the COUNT LED will illuminate. After the count has elapsed, the Dual Control System will automatically switch to the other sweeper. If no count has been set, the Dual Control System will immediately switch sweepers when the counter-weight sensor is activated.

If NO material is present in the second Sweeper:

At the time when the material level of the sweeper reaches a low level and the counter-weight sensor is activated, the Dual Control System will look at the other sensor on the second sweeper. If that sensor is also activated, indicating no material present in the gaylord, the Sweeper Dual Control System will alarm, alerting the operator. If a count of vacuum cycles is set, the Dual Control System will continue to alarm until the second sweeper’s sensor is deactivated by: material in the gaylord or the silence alarm button is pressed. The alarm will also sound if the second sweeper’s toggle button is set to the off position.

5. After a successful transition to the second sweeper, the operator can remove the empty gaylord and replace it with a full gaylord of material.

6. At any time the operator can:
   Change the vacuum cycle count.
   Change Sweeper button (CHG SWEEP) and switch gaylords.
Sweeper Diagrams

Model SW "Gaylord" Sweeper Pickup

Drawn by: CGC  Date drawn: 3/12/09

Material: Paint/Finish:
Wiring Diagram
WARRANTY - Exclusive 5-Year

MAGUIRE PRODUCTS offers one of the MOST COMPREHENSIVE WARRANTIES in the plastics equipment industry. We warrant each Sweeper Dual Control System manufactured by us to be free from defects in material and workmanship under normal use and service; our obligation under this warranty being limited to making good at our factory any SW Series Sweeper which shall within FIVE (5) YEARS after delivery to the original purchaser be returned intact to us, transportation charges PREPAID, and which our examination shall disclose to our satisfaction to have been thus defective; this warranty being expressly in lieu of all other warranties expressed or implied and of all other obligations or liabilities on our part, and MAGUIRE PRODUCTS neither assumes nor authorizes any other persons to assume for it any other liability in connection with the sale of its products.

This warranty shall not apply to any Sweeper Dual Control System which shall have been repaired or altered outside MAGUIRE PRODUCTS factory, unless such repair or alteration was, in our judgment, not responsible for the failure; nor which has been subject to misuse, negligence or accident, incorrect wiring by others, or installation or use not in accord with instructions furnished by Maguire Products.

Our liability under this warranty will extend only to Feeders that are returned to our factory in Aston, Pennsylvania PREPAID.

It should be noted, however, that we strive to satisfy our customers in whatever manner is deemed most expedient to overcome any problems they may have in connection with our equipment.
Technical Support and Contact Information

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