1.0 INTRODUCTION TO THE SECONDARY WIPE-DOWN ASSEMBLY

The Diagraph Secondary Wipe-Down Assembly (6105-103) is an option used with the PA/4020 configuration of the PA/4000 Series.

The PA/4020 combines a tamp applicator with a secondary wipe-down mechanism to apply wraparound labels up to 13 inches long. It can apply labels to the front and side or back and side of a box.

This manual contains the following information for the secondary wipe-down assembly:

- Theory of Operation
- Product Specifications
- Installation
- Setup
- Troubleshooting
- Spare Parts

NOTE: If your PA/4020 configuration (complete with a Secondary Wipe-Down Unit) has been installed by a Diagraph Technician, you can skip the Installation and Setup sections.

1.2 Product Specifications

<table>
<thead>
<tr>
<th>Spec</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Label Size</td>
<td>4 inches wide x 13 inches long (max)</td>
</tr>
<tr>
<td>Label Stock</td>
<td>Diagraph thermal transfer</td>
</tr>
<tr>
<td>Carton Size</td>
<td>4 1/2 inches high x 6 1/2 inches long (min)</td>
</tr>
<tr>
<td>Line Speed</td>
<td>Depends upon label size</td>
</tr>
<tr>
<td>Distance</td>
<td>4 inches max. distance from product</td>
</tr>
<tr>
<td>Power Required</td>
<td>12 or 24VDC</td>
</tr>
<tr>
<td>Air Required</td>
<td>Up to 100 psi (clean, dry shop air)</td>
</tr>
<tr>
<td>Operating Environment</td>
<td>50-95 degrees F (1-35 degrees C)</td>
</tr>
</tbody>
</table>
1. Extra roller
2. Cable from secondary wipe-down valve to photocell out (J6) on the rear electrical panel of the PA/4000
3. Cable from the Photocell to Photocell 2 (J3) on the rear electrical panel of the PA/4000
1.1 Theory of Operation

The PA/4020 applies labels to your product with the air cylinder/tamp pad. The photocell detects the exact location of the product and activates the secondary wipe-down unit. This activation enables the 2 inch diameter neoprene roller on the wipe-down unit to wipe down the label onto the adjacent panel of the carton. Upon completing the wiping motion, the cylinder retracts and awaits the signal from the photocell to begin the cycle again.

Adjustments must be made for the secondary wipe-down unit to accurately and consistently apply labels to your product. These adjustments include:

- Mechanical adjustment using a torsion spring to adjust the wiping force.
- Bracketry adjustments for varying label placement.
1.3 Installation

Tools Required
- 7/64 Hex Key
- 1/8 Hex Key
- 9/64 Hex Key
- 5/32 Hex Key
- 1/2 inch Box Wrench
- 3/8 inch Drill Bit & Drill

Step 1 - Mounting the base to the conveyor
- Mount the Base six inches down the line from the PA/4020.
- Mark the four holes in the mounting base on the conveyor and drill four 3/8 inch holes.
- Mount the base to the conveyor using four hex bolts, four lock washers and four flat washers.
- Tighten with the 1/2 inch wrench.

Step 2 - Inserting the crossbar into the base
- Slide the 1.25 inch diameter crossbar and clamp assembly, into the mounting base.
- Tighten the bolt in the mounting base to secure the crossbar with a 1/2 inch wrench.

Step 3 - The support shaft
- Slide the support shaft into the cross clamp assembly, ensuring that the support shaft is 90° to the crossbar.
- Tighten in place with a 1/2 inch wrench.

Step 4 - Mounting the cylinder assembly
- Mount the Cylinder Assembly to the support shaft with the flange of the Bearing down.
- Ensure that the rotating stop pin is cradled in the Mount.

Step 5 - The torsion spring
- For applications where the product is traveling from right to left, insert the left-handed torsion spring into the mount and slide the collar over the shaft and insert the other leg or the spring into the collar.
• Tighten the #10 screw in the collar to hold the assembly in place (for applications where the product is traveling from left to right, use the right-handed torsion spring).

**Step 6 - The logic control box**

• Install the Logic Control Box with the Cross Clamp by sliding the cross clamp onto the crossbar and tightening the 5/16 inch bolt.

**Step 7 - Connections**

• Connect the male end of the 6105-105 Interconnect Cable to the center connector on the logic control box. Connect the female end of the 6105-105 cable to PHOTOCCELL OUT on the PA/4000.

1.4 Setup

**Tools Required**

- 7/64 Hex Key
- 1/8 Hex Key
- 9/64 Hex Key
- 5/32 Hex Key
- 1/2 inch Box Wrench

Connect the Air Line and set the regulator to 60 psi.

**Step 1**

• Loosen the clamp supporting the support shaft. Adjust the support shaft until the roller is level with the label and the angle of the cylinder is 45° to the product.
• Tighten the 5/16 inch bolt using a 1/2 inch wrench.

**Step 2**

• Position the photocell opposite the assembly and move left or right until the applicator is triggering within 1 inch of the box edge.
• Mount the photocell at this point with hardware included (if you are using a second photocell).

**Step 3**
- Do your final adjustments to the output delay and tamp dwell settings using the PA/4000 Hand-Held Terminal.

**Step 4**

- Change the output pulse value to 25 with the PA/4000 Hand-Held Terminal. The cylinder will not fire if the output pulse value is lower than 25.

**1.4 Trouble-shooting**

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>SOLUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cylinder fires too soon</td>
<td>• Make sure the photocell is mounted in the proper location (See Installation section).</td>
</tr>
<tr>
<td></td>
<td>• Adjust the output delay setting using your hand-held terminal.</td>
</tr>
<tr>
<td>Cylinder fires too late</td>
<td>• Make sure the placement of the photocell is correct.</td>
</tr>
<tr>
<td></td>
<td>• Adjust the output delay setting using your hand-held terminal.</td>
</tr>
<tr>
<td></td>
<td>• Make sure the air regulator is set to 60 psi (this value may depend on your application).</td>
</tr>
<tr>
<td>Cylinder is not reaching the end of the label</td>
<td>• Make sure the air regulator is set to 60 psi (this value may depend on your application).</td>
</tr>
<tr>
<td></td>
<td>• Check the Tamp Dwell setting to be sure that the setting is correct.</td>
</tr>
</tbody>
</table>
## 1.5 Spare Parts List

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1741-002</td>
<td>Spring, Torsion (right)</td>
</tr>
<tr>
<td>1741-003</td>
<td>Spring, Torsion (left)</td>
</tr>
<tr>
<td>6105-151</td>
<td>Roller, Neoprene (6pk)</td>
</tr>
<tr>
<td>6105-143</td>
<td>Control Logic Box</td>
</tr>
<tr>
<td>6105-092</td>
<td>Tamp Cylinder, 12”</td>
</tr>
<tr>
<td>6105-123</td>
<td>Valve, 24VDC</td>
</tr>
<tr>
<td>1770-078</td>
<td>Regulator, 0-100 PSI</td>
</tr>
</tbody>
</table>

To order parts call or write to Diagraph Corporation at:

Diagraph Corporation  
3401 Rider Trail South  
Earth City, Mo. 63045  
Phone: (314) 739-9095  
Toll Free: 1-800-521-3047