BLACK-TOPPER®

Flow Charts and Control Positions

Standard Spraybar

with

BT-1 Keypad Controls
# Etnyre Spray Bar Nozzles

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Part No.</th>
<th>Description</th>
<th>Application Gallons Per Square Yard</th>
<th>Application Liters Per Square Meter</th>
<th>US Flow Gallons Per Minute Per Foot</th>
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<tbody>
<tr>
<td>1</td>
<td>3353788</td>
<td>V Slot Tack Nozzle 1/8&quot; Rifle Bored</td>
<td>.05 - .20</td>
<td>.23 - .91</td>
<td>3.0 to 4.5</td>
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<td>3351013*</td>
<td>V Slot Tack Nozzle 1/16&quot; Coin Slot</td>
<td>.05 - .20</td>
<td>.23 - .91</td>
<td>3.0 to 4.5</td>
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<td>V Slot Tack Nozzle 1/8&quot; Counterbored</td>
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<td>2</td>
<td>3351008</td>
<td>S36-4 V Slot</td>
<td>.10 - .35</td>
<td>.45 - 1.58</td>
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<td>3351009</td>
<td>S36-5 V Slot</td>
<td>.18 - .45</td>
<td>.81 - 2.04</td>
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<td>End Nozzle (use with 3352204 nozzle)</td>
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<td>7.5 to 12.0</td>
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<td>.40 - 1.10</td>
<td>1.81 - 4.98</td>
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</table>
Important

The instructions represented here are a guide and not designed to be comprehensive. Refer to M-103-17 Centennial Asphalt Distributor Operation, Maintenance and Safety manual for complete instructions.

This pamphlet is provided as a tool to aid personnel in the operation of the Etnyre Blacktopper Centennial Distributor, as with any type of construction equipment, there are certain hazards associated with improper or careless operation. The ability to read and understand the instructions should be a required qualification to become an operator. There are also functions that require a certain amount of physical strength to accomplish. Persons lacking the required strength may not only place themselves in jeopardy, but also others in the vicinity. Read and understand the Safety precautions found in M-103-17 Centennial Asphalt Distributor Operation, Maintenance and Safety manual before operating this machine.

If you have any questions regarding this pamphlet or the operation of your unit, contact your Etnyre dealer or the E. D. Etnyre Service Department at 1-800-995-2116.

WARNING

Do not use this machine for any operation which is not described in the Operation manual.

If you have any questions about the operation of this machine, contact the Etnyre Service Department at 1-800-995-2116 or 1-815-732-2116. Operations that are not approved could cause serious injury or death.
Bar Suck Back Override

This feature is designed for quick in-cab switching between bar circulate and bar suck back for units equipped with automatic tank and bar suck back valves. When the SUCK BACK OVERRIDE switch is ON, all automatically controlled valves are set to their correct positions for SUCK BACK. This overrides any settings of the Function Keypad and stops the asphalt pump when the PUMP CONTROL switch is in AUTO.

When ON, this switch overrides the current setting of the Function keypad in the rear panel to the SUCK BACK selection.

The SUCK BACK OVERRIDE must be OFF for the Function keypad and the PUMP CONTROL switch to work correctly.

The following steps are performed in the cab while the Function keypad is turned to BAR CIRCULATE.

1. Turn the SUCK BACK OVERRIDE switch ON.
2. Press START. The pump will start turning at the preset rate. 200 GPM is recommended.
3. If complete bar suck back is desired, follow the instructions for bar suck back.
4. Turn the SUCK BACK OVERRIDE switch OFF.
5. Press START. The pump will start turning at the desired circulation rate.

Note: The pump can be stopped and the automatic tank valve can be closed immediately at any time during operation by turning the POWER switch OFF. Before turning the POWER switch back ON, turn the PUMP SPEED to zero if the PUMP CONTROL switch is in MANUAL, to prevent the pump from turning.
1. **SPRAY Switch**
Turning this switch to ON when the Function keypad (rear panel) is turned to BAR CIRCUIT or SUCK BACK, opens all activated spray valves.

2. **START Button**
Starts the asphalt pump turning at the target pump rate or starts calibration operations in the setup screens.

3. **POWER Switch**
Both the POWER switch in the cab and the EMERGENCY STOP switch in the rear panel must be ON for the control system to be ON. The entire system can be shut down by turning either switch to OFF. Before turning either switch ON be sure you know what will automatically activate.

4. **PUMP SPEED Control Knob**
When MANUAL PUMP CONTROL is selected, turning this knob to the right (clockwise) increases the asphalt pump speed. It is possible to over-speed the asphalt pump in MANUAL control since the asphalt pump speed is also dependent on the engine speed. Always turn the knob back to the left (counterclockwise) before selecting AUTO PUMP CONTROL or turning the POWER switch in the cab or the EMERGENCY STOP switch in the rear panel. Push Start button to activate pump control in either manual or auto.

5. **Keypad**
When the desired operation is selected through this keypad, all automatic valves - tank valve, 4-way valve, bar suck back valves, return valve and balance valves (Big Bar only) - are set for the desired operation. The asphalt pump stops, and, when the PUMP CONTROL is in AUTO, the stored asphalt pump rate target preset for the desired operation is recalled.

6. **PUMP CONTROL Switch**
With the switch turned to AUTO, the asphalt pump speed is controlled at the desired rate through the computer which limits the maximum pump speed to 400 GPM. When the Function Keypad is set to BAR CIRC (Bar Circulate), the pump speed is limited to a maximum of 120 GPM.

   With the switch turned to MANUAL, the asphalt pump speed is controlled with the PUMP SPEED control knob.

   In AUTO control, A flashes until the START button is pressed. In MANUAL control, M flashes until the START button is pressed.

   Use the Black-Topper Computator App when spraying in MANUAL control (www.etnyre.com).

Changing the selection after the pump is turning will stop the asphalt pump whether in AUTO or MANUAL control.

When BAR CIRC (Bar Circulate) is selected, the asphalt pump rate target is set based on the displayed spray width, application rate, and the setting of the %CIRC factor.

For all positions of this keypad, except BAR CIRC (Bar Circulate), the asphalt pump rate preset can be set to operator preference by first selecting AUTO PUMP CONTROL. Then, before pressing the START button, change the pump rate target to the desired rate, then press the START button to save the desired rate and start the pump turning.

The factory pump rate target presets are (With Metric equivalents also):

- **LOAD 100 GPM**
- **TANK CIRCULATE 150 GPM**
- **SUCK BACK 200 GPM**
- **FLUSH 100 GPM**
- **UNLOAD 100 GPM**
- **HAND SPRAY and AUX 50 GPM**
- **TRANSFER 100 GPM**
Load through Manhole

**WARNING**
To prevent possible injury, always open the manhole cover slowly. Pressure build up in the tank may cause the cover to burst open.

**Cab Panel**
- POWER Switch OFF

**Rear Panel**
- Press HOME on Function Keypad
- POWER Switch OFF
Load through Load Line

The instructions represented here are a guide and not designed to be comprehensive. Refer to M-103-17 Centennial Operation Manual for complete instructions.

**Cab Panel**
- **POWER Switch** ON
- **100 GPM** - adjust using **VALUE switch**

**Rear Panel**
- **POWER switch (E Stop)** ON
- **PUMP CONTROL** switch **AUTO**
- **PUMP SPEED** knob zero (fully counterclockwise)
- Press **LOAD** on Function keypad
- Push “START” switch

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The Load Line should be loaded through Load Line while the following conditions are met:

- **POWER switch (E Stop)** ON
- **PUMP CONTROL** switch in **AUTO**
- **PUMP SPEED** knob in zero (fully counterclockwise)
- Press **LOAD** on Function keypad
- Push “START” switch

**Load Line and Valve Positions**

- **Transfer Line Suck Back Valve** Closed
- **Transfer Line cap on and secured**
- **Master Handspray Valves Off**
- **Transfer Valve Closed**
- **Flush Valve Closed**
- **Suck Back Valve Open**
- **Return Valve Closed**
- **Hand Spray Valve Closed**
- **4 Way Valve LOAD** (Keyway in 12 o’clock position)
- **Tank Valve Closed**

**Do not remove Load Line cap if front or rear tank valve is open**
Circulate In Tank

The instructions represented here are a guide and not designed to be comprehensive. Refer to M-103-17 Centennial Operation Manual for complete instructions.

**Cab Panel**
- POWER Switch ON
- 100 to 150 GPM - adjust using VALUE switch

**Rear Panel**
- POWER switch (E Stop) ON
- PUMP CONTROL switch AUTO
- PUMP SPEED knob zero (fully counterclockwise)
- Press TANK CIRCULATE on Function keypad
- Push “START” switch
Circulate In Bar

Handspray Valve Positions
- OFF
- HANDSPRAY
- SUCKBACK

Transfer Line Suck Back Valve Closed
Transfer Line cap on and secured

Return Valve Open
Master Handspray Valves Off

4 Way Valve
BAR CIRC
(Keyway in 9 o'clock position)

Tank Valve Open

The instructions represented here are a guide and not designed to be comprehensive. Refer to M-103-17 Centennial Operation Manual for complete instructions.

Cab Panel
- POWER switch ON
- SPRAY switch OFF
- Set the application rate with a MEMORY switch or by using the VALUE switch
- Set spray width with One Foot switches

Rear Panel
- POWER switch (E Stop) ON
- PUMP CONTROL switch AUTO
- PUMP SPEED knob zero (fully counterclockwise)
- Press BAR CIRCULATE on Function keypad
- Push “START” switch
Spray

NOTE: Unit should already be operating in Bar Circulate and circulating oil to be ready to spray.

**Cab Panel**
- POWER switch ON
- Spraybar Switches (as desired) “ON”
- When the spray bar reaches the beginning of the shot, turn the SPRAY switch ON, turn the switch OFF at the end of the shot.

**Rear Panel**
- POWER switch (E Stop) ON
- Press BAR CIRCULATE on Function keypad

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Suckback Spraybar

Handspray Valve Positions

- OFF
- HANDSPRAY
- SUCKBACK

Open and close left valve, then right.

Rear Panel
- POWER switch (E Stop) ON
- PUMP CONTROL switch AUTO
- PUMP SPEED knob zero (fully counterclockwise)
- Press SUCKBACK on Function keypad
- Push “START” switch

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Cab Panel
- POWER switch ON
- 200 GPM - adjust using VALUE switch

Bleeder Valve is last flip lever valve on wings.

Transfer Line Suck Back Valve Closed
- Transfer Line cap on and secured

Transfer Valve Closed
- Load Line cap on and secured

Hand Spray Valve Closed
- Tank Valve Closed

4 Way Valve SUCK BACK (Keyway in 12 o’clock position)

Flush Valve Closed
Handspray

For safety reasons, it is recommended to use Auto function while handspraying.

The instructions represented here are a guide and not designed to be comprehensive. Refer to M-103-17 Centennial Operation Manual for complete instructions.

Cab Panel
- POWER switch ON
- 50 GPM - adjust using VALUE switch

Rear Panel
- POWER switch (E Stop) ON
- PUMP CONTROL switch AUTO
- PUMP SPEED knob zero (fully counterclockwise)
- Press HANDSPRAY on Function keypad
- Push “START” switch

The instructions represented here are a guide and not designed to be comprehensive. Refer to M-103-17 Centennial Operation Manual for complete instructions.
Suckback Handspray

Handspray Valve Positions

- OFF
- HANSDRAY
- SUCKBACK

Rear Panel
- POWER switch (E Stop) ON
- PUMP CONTROL switch AUTO
- PUMP SPEED knob zero (fully counterclockwise)
- Press SUCKBACK on Function keypad
- Push “START” switch

Cab Panel
- POWER switch ON
- 200 GPM - adjust using VALUE switch

Transfer Line cap on and secured

Load Line cap on and secured

The instructions represented here are a guide and not designed to be comprehensive. Refer to M-103-17 Centennial Operation Manual for complete instructions.
Unload with External Pump or (Gravity)

The instructions represented here are a guide and not designed to be comprehensive. Refer to M-103-17 Centennial Operation Manual for complete instructions.

Connect Load Line to the Storage Tank pump or distributor you wish to transfer to. Do not remove Load Line cap if front or rear tank valve is open.

Rear Panel
- POWER switch (E Stop) ON
- PUMP CONTROL switch MANUAL
- PUMP SPEED knob zero (fully counterclockwise)
- Press TANK CIRC button on Function Keypad
- Push “START” switch
- Operate pump @ 10 GPM in Manual to allow pump to circulate material to prevent pump from getting too cold (if possible).
Unload with Distributor Pump

Handspray Valve Positions

Transfer Line Suck Back Valve Closed

Connect transfer line to the storage tank. Do not remove Transfer Line cap if front or rear tank valve is open or if asphalt pump is turning.

UNLOAD with Distributor Pump

• POWER switch (E Stop) ON
• Press UNLOAD on Function keypad
• PUMP CONTROL switch AUTO
• PUMP SPEED knob zero (fully counterclockwise)
• Push “START” switch

The instructions represented here are a guide and not designed to be comprehensive. Refer to M-103-17 Centennial Operation Manual for complete instructions.

Cab Panel
• POWER Switch ON
• 100 GPM - Adjust using VALUE switch

Rear Panel
• POWER switch (E Stop) ON
• Press UNLOAD on Function keypad
• PUMP CONTROL switch AUTO
• PUMP SPEED knob zero (fully counterclockwise)
• Push “START” switch
The instructions represented here are a guide and not designed to be comprehensive. Refer to M-103-17 Centennial Operation Manual for complete instructions.

**Transfer Pump**

**Handspray Valve Positions**
- OFF
- HANDSPRAY
- SUCKBACK

**Rear Panel**
- POWER switch (E Stop) ON
- Press TRANSFER on Function keypad
- PUMP CONTROL switch AUTO
- PUMP SPEED knob zero (fully counterclockwise)
- Push “START” switch

**Cab Panel**
- POWER Switch ON
- 100 GPM - adjust using VALUE switch

**连接Transfer Line to the storage tank. Do not remove Transfer Line cap if front or rear tank valve is open or if asphalt pump is turning.**

**连接Load Line to the supply tank. Do not remove Load Line cap if front or rear tank valve is open.**
Flushing Pump

The instructions represented here are a guide and not designed to be comprehensive. Refer to M-103-17 Centennial Operation Manual for complete instructions.

Cab Panel
- POWER Switch ON
- 100 GPM - adjust using VALUE switch

Rear Panel
- POWER switch (E Stop) ON
- PUMP CONTROL switch AUTO
- PUMP SPEED knob zero (fully counterclockwise)
- Press LOAD on Function keypad
- Push “START” switch
- WASH PUMP switch (optional) - ON

Handspray Valve Positions
- OFF
- HANDSPRAY
- SUCKBACK

Suck Back Valve
- Closed

Return Valve
- Open

Master Handspray Valves Off

Transfer Valve
- Closed

Transfer Line
- Suck Back Valve Closed

Load Line cap on and secured

Load Line cap on and secured

Flush Valve
- Open

4 Way Valve
- LOAD (Keyway in 12 o’clock position)

Hand Spray Valve
- Closed

Tank Valve
- Closed
Flushing Bar

AUTO - computer controls circulation rate preselected by the computer.
MANUAL - Operator controls pump speed with pump speed knob.
See M-103-17 “Bar Flush (Manual)” for instructions.

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Cab Panel
- POWER Switch ON
- 100 GPM - adjust using VALUE switch

Rear Panel
- POWER switch (E Stop) ON
- Press FLUSH on Function keypad
- PUMP CONTROL switch AUTO
- PUMP SPEED knob zero (fully counterclockwise)
- Push “START” switch
- WASH PUMP switch (optional) - ON
Front Load
(optional equipment)

Cab Panel
- POWER Switch ON
- 100 GPM - adjust using VALUE switch

Rear Panel
- POWER switch (E Stop) ON
- Press TANK CIRC on Function keypad
- PUMP CONTROL switch AUTO
- PUMP SPEED knob zero (fully counterclockwise)
- FRONT LOAD switch (optional) - OPEN
- Push “START” switch

The instructions represented here are a guide and not designed to be comprehensive. Refer to M-103-17 Centennial Operation Manual for complete instructions.