

**M-103-2-19**

Serial Number S7784 and up  
with BT1 Controls

November 1, 2019



**Black-Topper®**

# **Asphalt Distributor With BT 1 Controls**

Smart Clean Recirculating Flushing System

## **Smart Clean Operation**

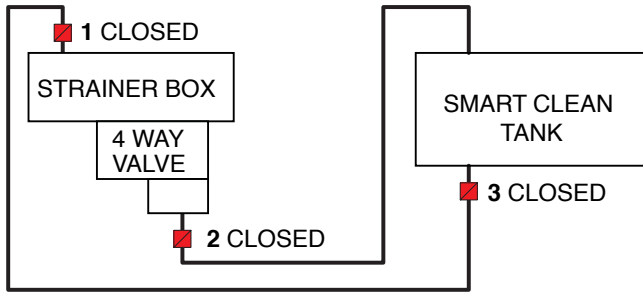
- Spray Bar Smart Clean Procedure
- Asphalt Pump Smart Clean Procedure
- Empty Smart Clean Tank Into Main Tank
- Adjusting Preset Smart Clean Functions
- Smart Clean Flow Diagrams
- Smart Clean Repair Parts



**E.D. ETNYRE & CO. – 1333 S. Daysville Road – Oregon, Illinois 61061**

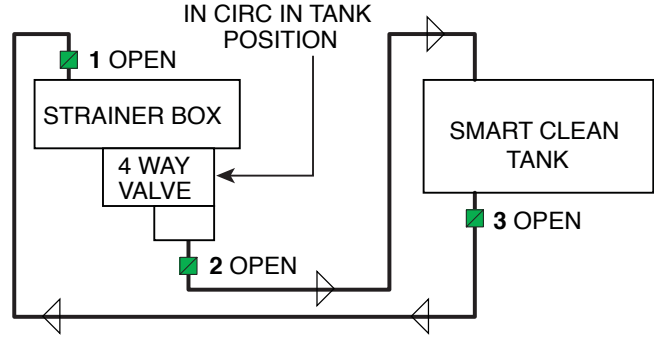
Phone: 815-2116 or 800-995-2116 – Fax: 800-521-1107 – [www.etnyre.com](http://www.etnyre.com)

## SYSTEM OFF



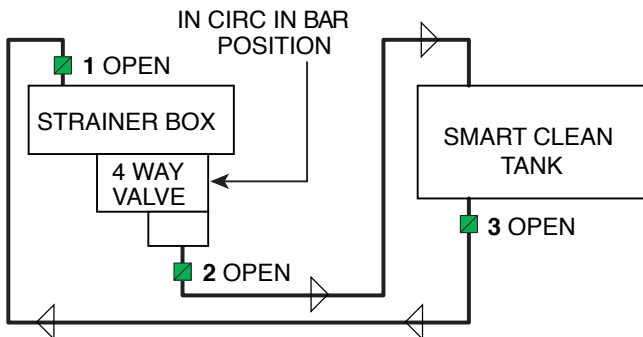
- VALVE = OPEN
- VALVE = CLOSE

## PUMP CLEAN



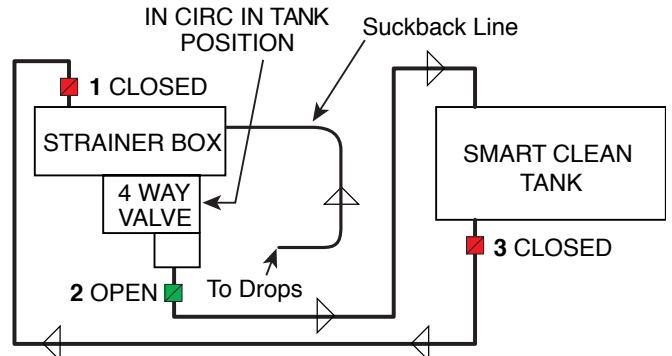
- VALVE = OPEN
  - VALVE = CLOSE
- REAR SUCTION = CLOSED  
TANK RETURN = CLOSED

## BAR CLEAN



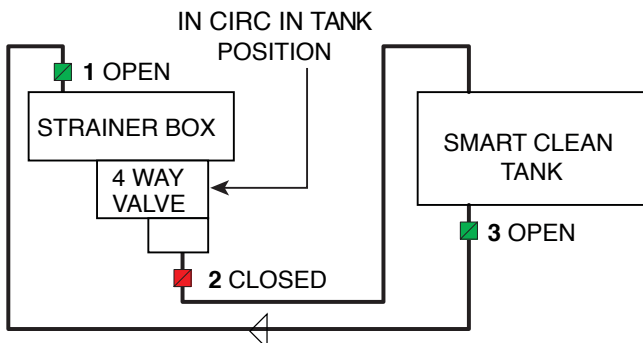
- VALVE = OPEN
  - VALVE = CLOSE
- REAR SUCTION = CLOSED  
TANK RETURN = CLOSED

## BAR CLEAN SUCKBACK



- VALVE = OPEN
  - VALVE = CLOSE
- REAR SUCTION = CLOSED  
TANK RETURN = CLOSED

## FLUSH TANK EMPTY INTO MAIN TANK



- VALVE = OPEN
  - VALVE = CLOSE
- REAR SUCTION = CLOSED  
TANK RETURN = OPENED

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FLOW DIAGRAM - SMART CLEAN  
9307121

# SMART CLEAN OPERATIONS

## Optional Smart Clean System

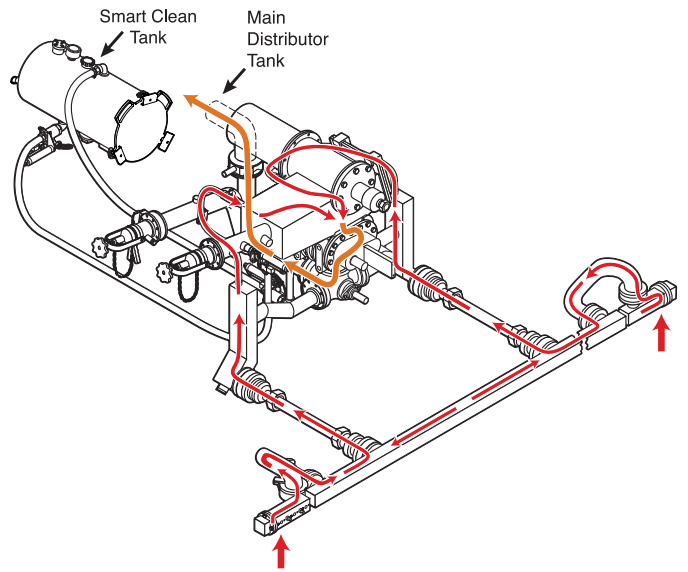
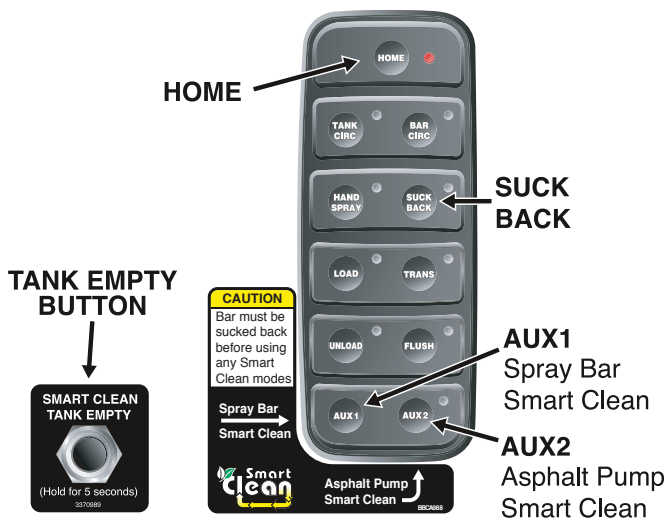
The Smart Clean system is an automatic closed system which pulls flushing solvent from the Smart Clean tank, pumps it through the circulating system and spray bar and returns the solvent to the Smart Clean Tank.

## Recirculating Smart Clean Operation

Complete the **standard suck back procedure(s)** found in M-103-19 Black-Topper Operation manual **before** starting the Smart Clean operation.

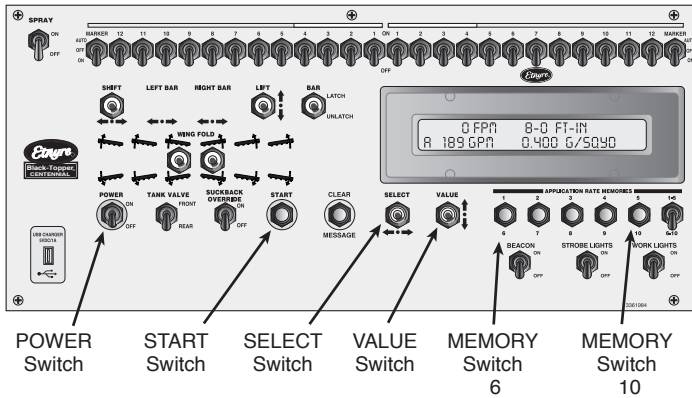
Normally the standard suckback procedure will remove sufficient material from the circulating system to negate the need for performing the Smart Clean procedure.

Flushing Solvent must be in the Smart Clean tank for the Smart Clean procedure.

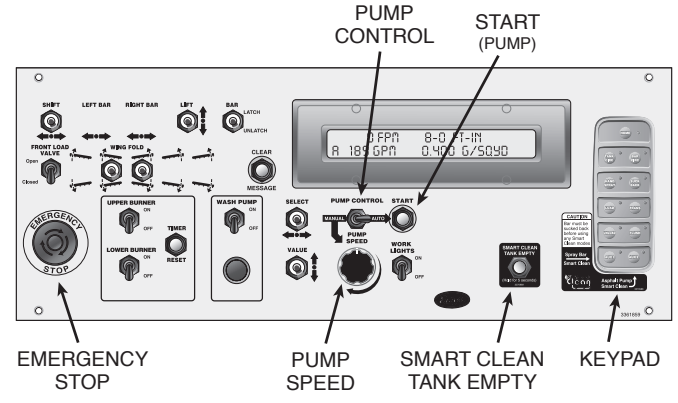


SMART CLEAN SYSTEM OPERATION CONTROLS

STANDARD SUCK BACKFLOW



CAB CONTROL PANEL



REAR CONTROL PANEL

# Spray Bar Smart Clean

## At the cab control panel:

Turn on the POWER switch.

## At the rear control panel:

1. Turn the EMERGENCY STOP switch ON.
2. **Confirm unit is properly sucked back.**
3. Press the AUX1 button on the Function keypad (Spray Bar Smart Clean).
4. Put the PUMP CONTROL to AUTO.
5. Press START. The pump will start turning at a preset circulation rate (200 GPM). For two minutes the system will engage a standard suckback. After this the pump will start turning at the preset circulation rate (50 GPM).

NOTE: If fluid does not begin to drain from the Smart Clean tank, the following steps may need to be done in order to form a vacuum.

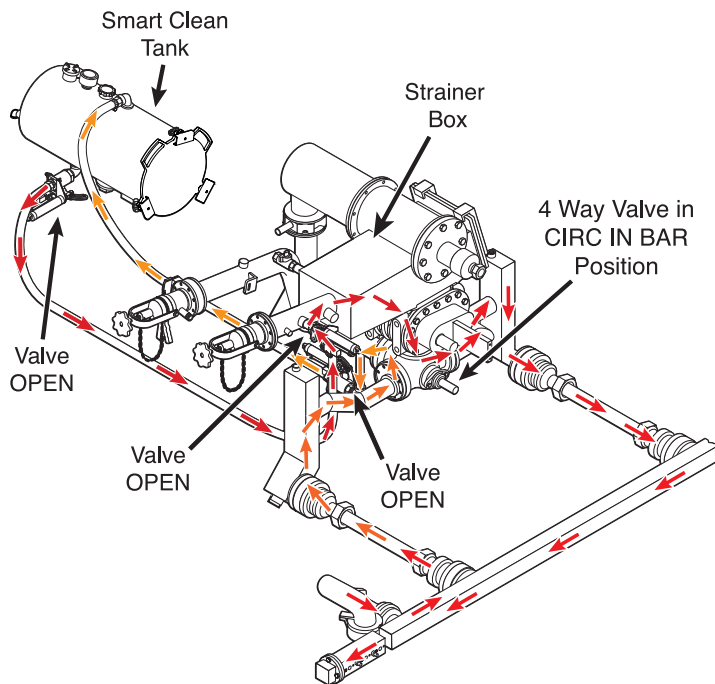
- a. Press the AUX1 button on the Function keypad (Spray Bar Smart Clean).
- b. Put the PUMP CONTROL to MANUAL.
- c. Press Start.
- d. Slowly turn speed up until Smart Clean tank starts to empty (near 150 GPM).

- e. Turn the PUMP SPEED CONTROL back to AUTO to stop the pump. The pump should now have appropriate vacuum to run in AUTO Smart Clean modes.

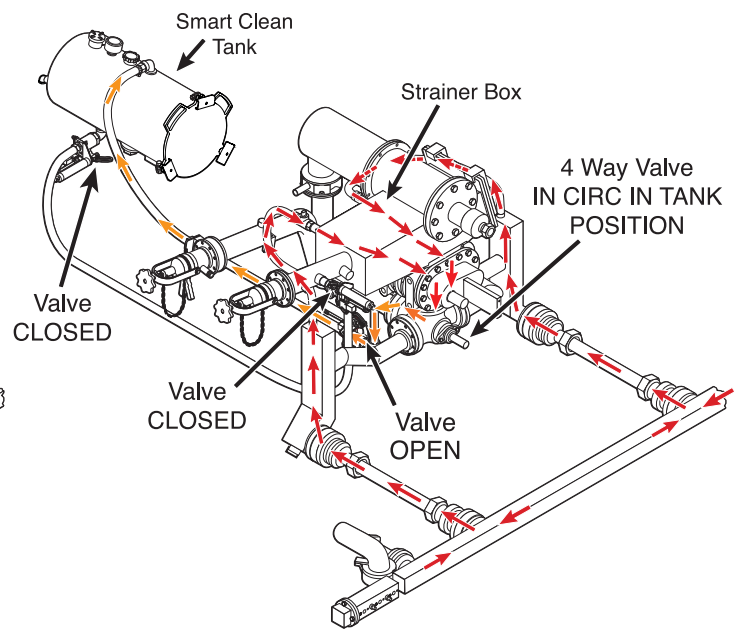
6. After the desired clean time (factory set at 120 seconds) the Smart Clean valves will switch and the pump will change speed to 200 GPM and begin to suck back the solution in the bar automatically.
7. Open the bleeder valve on the left wing for one minute and then close the valve. Open the bleeder valve on the right wing for one minute and then close the valve.
8. Check Smart Clean tank to confirm fluid is returning after the set suck back time (factory set at 120 seconds). The pump will stop.
9. Press the HOME button on the Function keypad.

**NOTE:** To stop the pump in MANUAL control select AUTO control. To stop the pump in AUTO control turn the PUMP SPEED knob fully counter clockwise and select MANUAL control.

The pump can be stopped by turning the EMERGENCY STOP switch OFF



### BAR CLEAN



### SUCK BACK

After the desired clean time, the system will suck back the bar automatically

# Asphalt Pump Smart Clean

## At the cab control panel:

Turn the POWER switch ON.

## At the rear control panel:

1. Turn the EMERGENCY STOP switch ON.
2. Confirm unit is properly sucked back.
3. Press the AUX2 button on the Function keypad (Asphalt Pump Smart Clean).
4. Put the PUMP CONTROL to AUTO.
5. Press START. The pump will start turning at a preset circulation rate (200 GPM). For two minutes the system will engage a standard suckback. After this the pump will start turning at the preset circulation rate (50 GPM).

NOTE: If fluid does not begin to drain from the Smart Clean tank, the following steps may need to be done in order to form a vacuum.

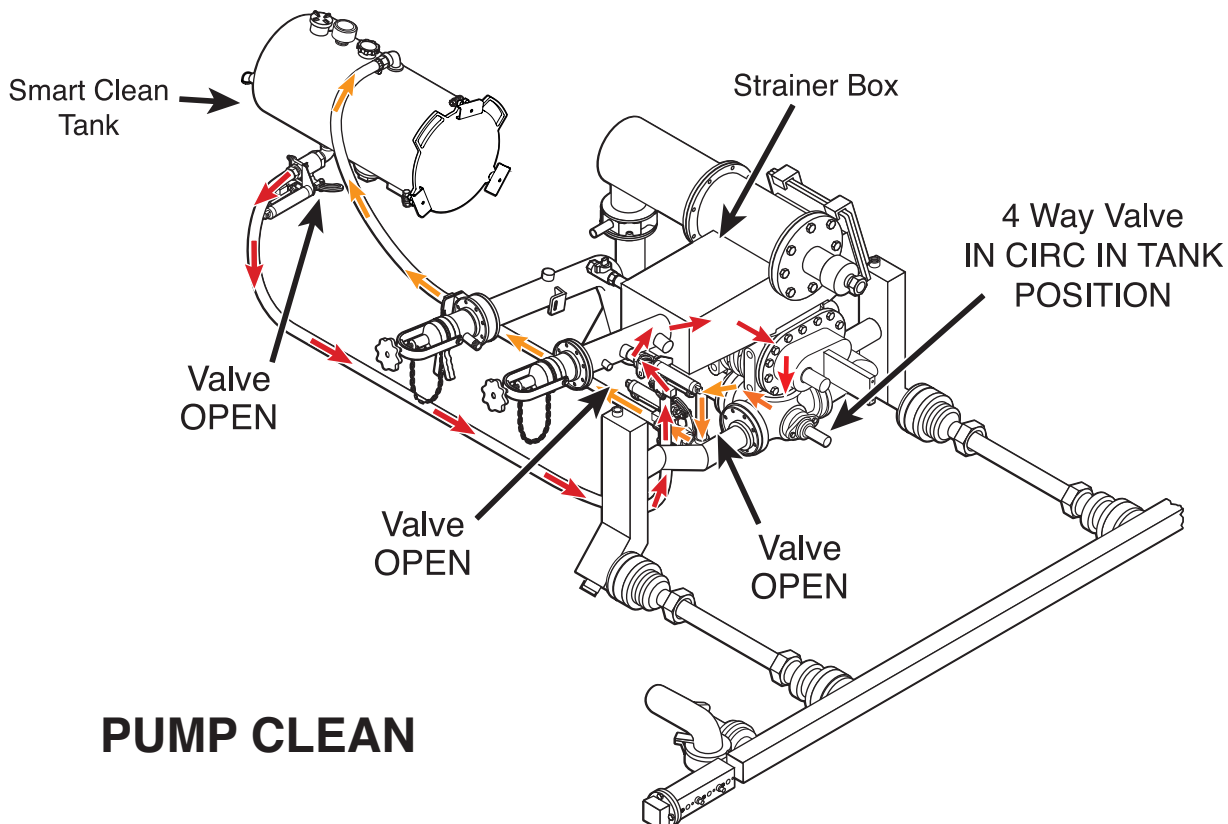
- a. Press the AUX1 button on the Function keypad (Spray Bar Smart Clean).

- b. Switch the PUMP CONTROL to MANUAL.
- c. Press START.
- d. Slowly turn speed up until Smart Clean tank starts to empty (near 150 GPM).
- e. Turn the PUMP SPEED control back to AUTO to stop the pump. The pump should now have appropriate vacuum to run in auto Smart Clean modes.

6. During the pump clean period (factory set to 120 seconds), check Smart Clean Tank to confirm fluid is both draining and returning.
7. Press the HOME button on the Function keypad.

**NOTE:** To stop the pump in MANUAL control select AUTO control. To stop the pump in AUTO control turn the PUMP SPEED knob fully counter clockwise and select MANUAL control.

The pump can be stopped by turning the EMERGENCY STOP switch OFF.



## Empty Smart Clean Tank Into Main Tank

### At the cab control panel:

Turn the POWER switch on.

### At the rear control panel:

1. Turn the EMERGENCY STOP switch ON.
2. Must be in AUX1 or AUX2
3. Press and hold Smart Clean Tank Empty button for 5 seconds. The pump will run for 30 seconds at 50 GPM. If the tank does not drain completely, repeat step 3.

**CAUTION:** This function will put the Smart Clean solution into the main tank. Be sure you want to mix before using this function.



### WARNING

#### To prevent possible burns from foaming or violent eruption:

Do not transfer the contents of the Smart Clean Tank if the material temperature in the Asphalt Tank is over 200°F or if water and/or condensation is present in the Smart Clean Tank or if emulsion was previously flushed with the Smart Clean system.

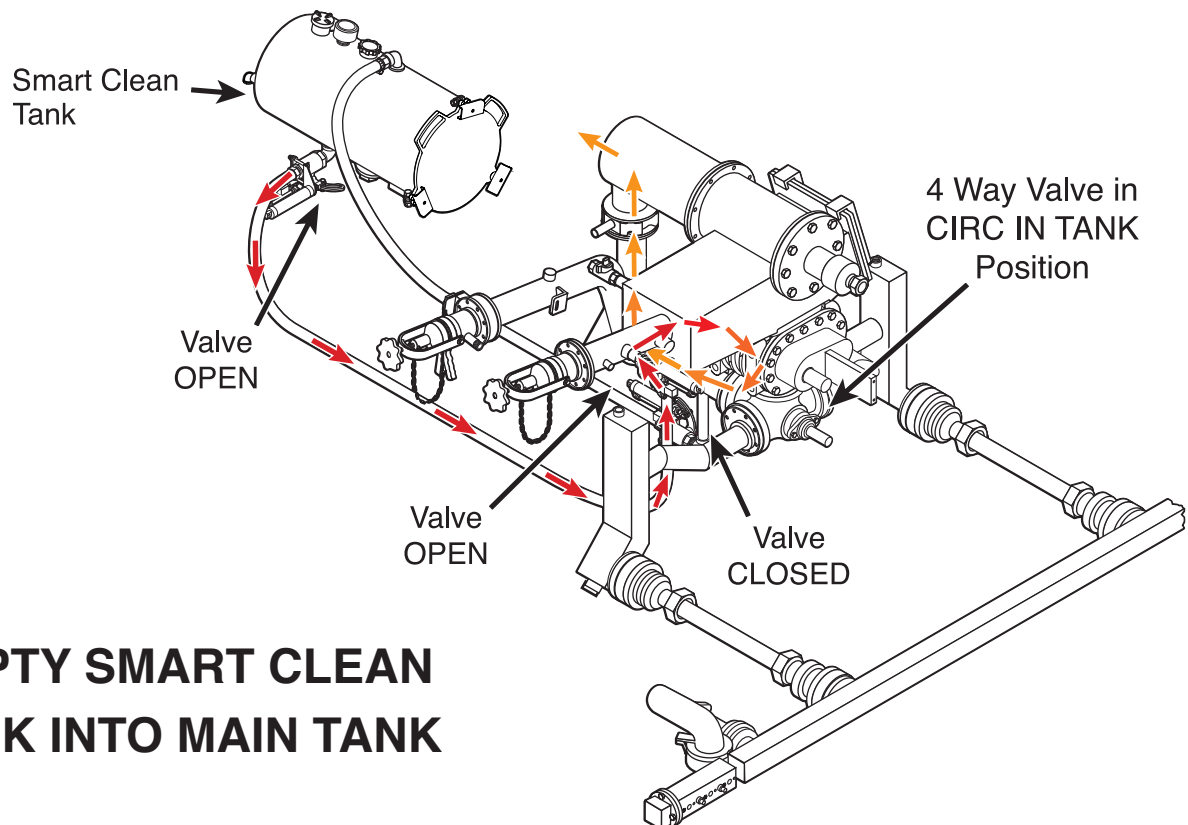
## Adjusting Preset Smart Clean Functions:

Enter the setup screens.

1. Press and hold Memory 6 & 10 buttons down while turning power switch to On. Release buttons.
2. Use the Select switch to navigate to the Smart Clean window pictured below.

SM FLUSH TIME = 120 SEC  
SM SKBCK TIME = 120 SEC

3. When cursor is over SM FLUSH TIME or SM SKBCK TIME, use the Value Switch to adjust the time. NOTE: SM FLUSH TIME adjusts both Spray Bar Smart Clean and Asphalt Pump Smart Clean time.
4. Cycle power to control panel to exit setup screens (use the EMERGENCY STOP button on the rear control panel or MASTER POWER switch in the front control panel).

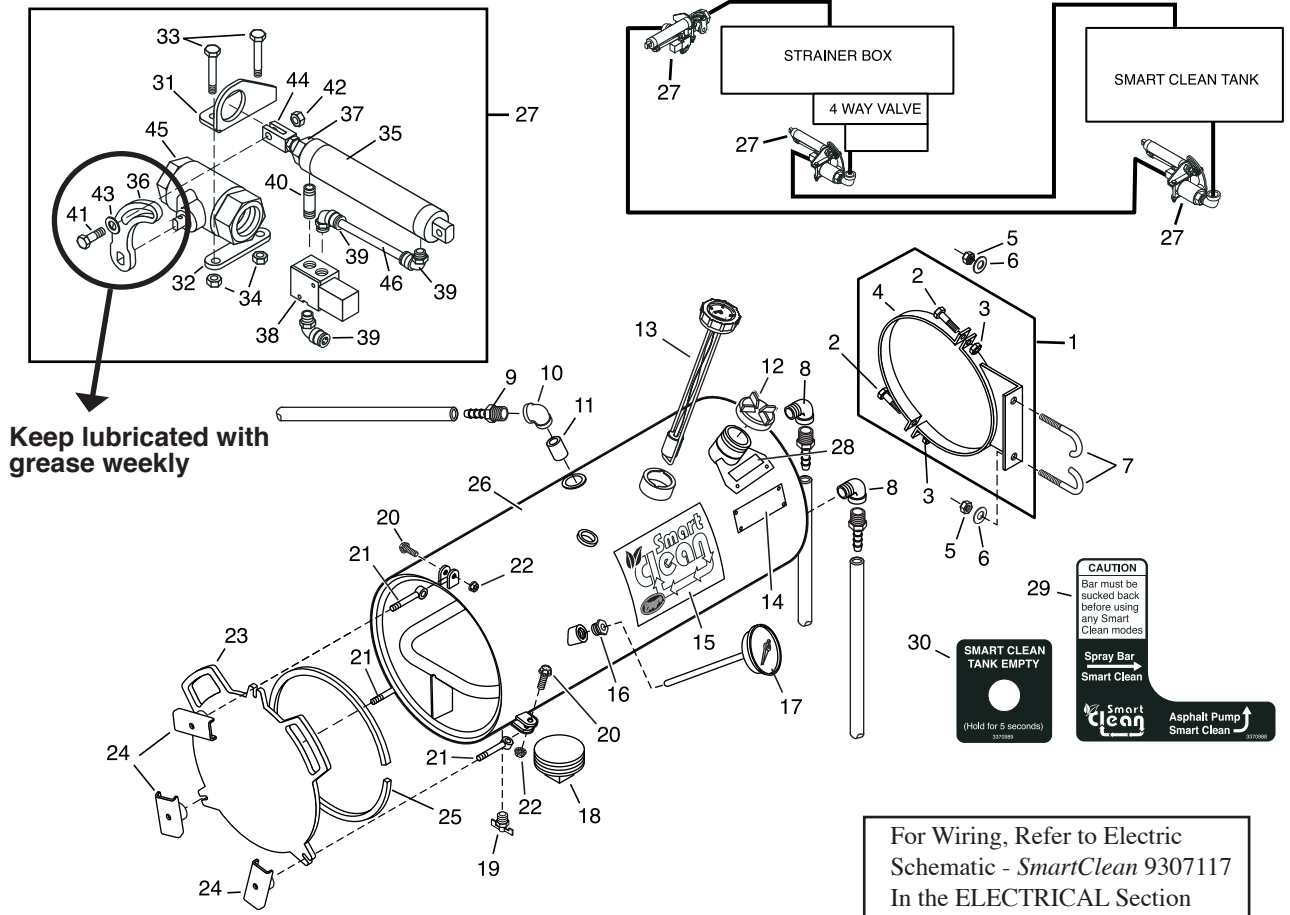


## EMPTY SMART CLEAN TANK INTO MAIN TANK



## SmartClean Recirculating Flushing System - Optional

Serial Numbers S7784 & Up



REF	PART NO.	QTY	DESCRIPTION	REF	PART NO.	QTY	DESCRIPTION
1	2610041	2	Bracket Asm-Mtg, Fuel Tank (Includes Ref 2-4)	24	2600376	3	Handle Asm
2	0122459	4	Screw-Hex, 0.505-NC x 2.00, GR2, PD	25	6600323	AR	Packing
3	9411727	4	Nut-Hex, Lock, 0.50NC EA, PD	26	3383153	1	Tank Weldment-SmartClean, Heated
4	3311022	2	Band-Support, Fuel Tank	27	3362145	3	Valve Asm-Ball, Smart Clean
5	9413948	4	Nut-Hex, Lock, 0.62NC, EA, GRA, PD	28	5005423	1	Decal: Fill With Release Agent Only
6	9422850	4	Washer-Flat, 0.62A (0.65 x 1.31)HN	29	3370988	1	Decal: Smart Clean, Spray Bar/Asphalt
7	3360726	4	Bolt-Hook, Bit, Frame Truck	30	3370989	1	Decal: Smart Clean Tank Empty
8	0108686	2	Elbow-Pipe, 90, ST, 0.50"NPT, PN (Install if Heated SmartClean System)	31	3383276	1	Bracket-Cylinder Holder
9	6600647	1	Hose End-12 x 12MP, ST, LPSP	32	3383277	1	Plate-Linkage Clamp, Smart Clean
10	0144129	1	Elbow-Pipe, 90, 0.75"NPT, PD	33	0180048	2	Capscrew-Gr5, 0.25"UNC x 2.5" Lg
11	6200530	1	Nipple-PP, Sch80, 0.75"CL, PD	34	6100713	2	Nut-Flanged, 1/4-20NC
12	6100235	1	Cap-Filler, Fuel Tank	35	6602338	1	Cylinder-Air, 1.06 3 DBL ACT
13	6601307	1	Gauge-Liquid, Level, 14"	36	3383278	1	Plate-Ball Valve, Smart Clean
14	3390570	1	Plate-Identification Fuel Tank	37	0124944	1	Nut-Hex, Jam, 0.63"NC, PD
15	3383159	1	Decal-Smart Clean	38	6602901	1	Valve-Air, Solenoid, 4Way-2Position
16	0144033	1	Bushing-Pipe, 0.75" x 0.25"NPT, PN	39	6603831	3	Adapter, Air, 90, 04Tube-02MPX, PD
17	6500039	1	Thermometer, 2.0" Dial, 9.0" Dual	40	0192042	1	Nipple-Sch40, 0.12"x1.5", PD
18	6200153	1	Plug-Pipe, SqHd, 3.0"NPT, PN	41	0180024	1	Capscrew-Gr5, 0.25"UNC x 1.25" Lg
19	6600162	1	Cock-Drain, 0.25", External Seat	42	6100400	1	Nut-Lock, 1/4-20Nylon, 18-8SS, Hex
20	6100880-05	3	Bolt-Wiz, 0.375"UNC x 1.5", Gr5, PD	43	0120386	2	Washer-Flat, SAE STD, 0.25"
21	2600371	3	Bolt-Eye, 20" Manhole	44	6602339	1	Clevis-Rod, Cylinder
22	6002390	3	Nut-Hex, Ser Flg, 0.38"NC Gr2, PD	45	6601177	1	1.0" Ball Balve
23	3383158	1	Plate-Lid, SmartClean	46	6604727	1	0.25" Tube, PTFE