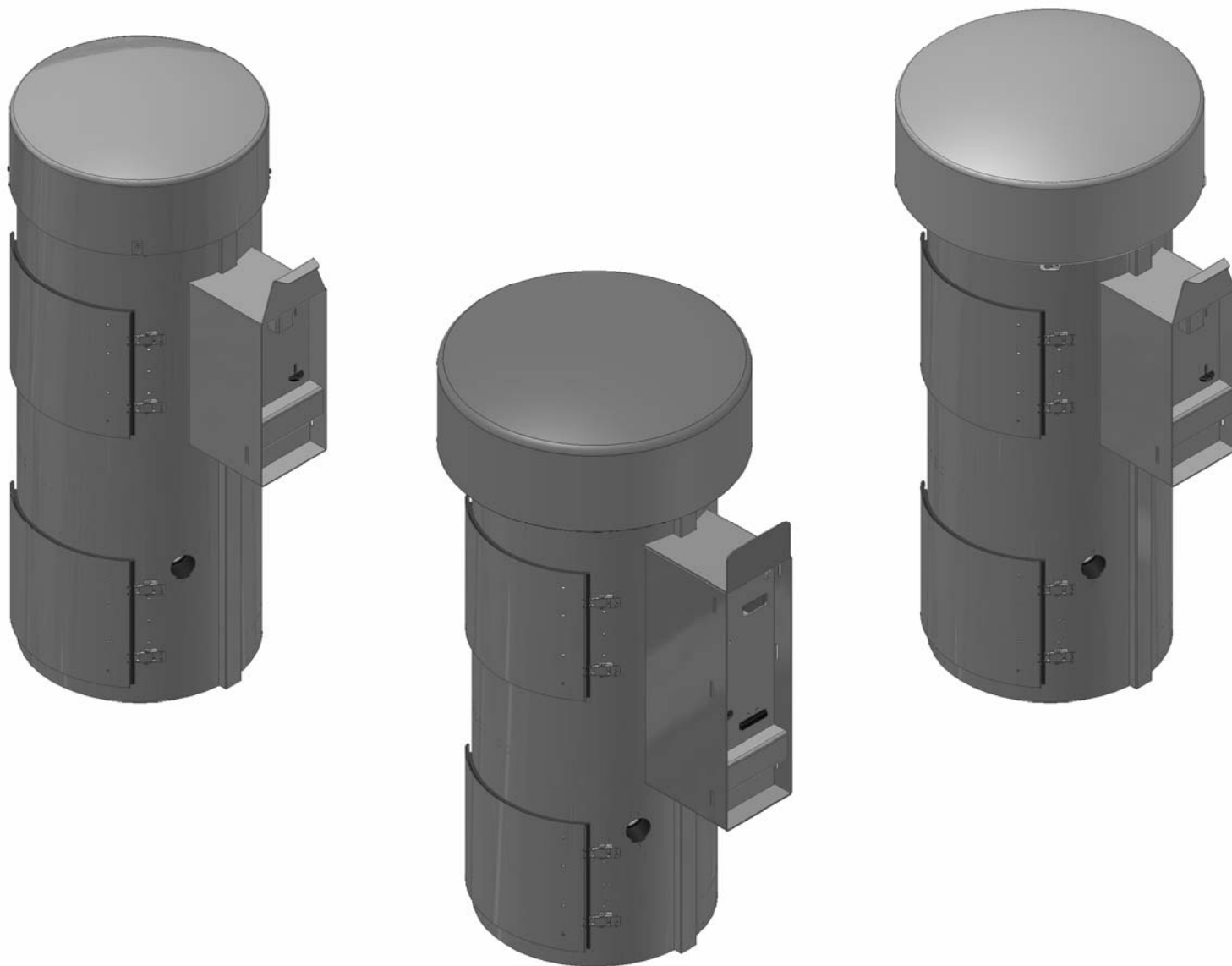




# 9200 SERIES VACS

## OWNERS MANUAL



# **TABLE OF CONTENTS**

● <b>Product Information.....</b>	<b>3</b>
● <b>Specifications.....</b>	<b>4</b>
● <b>Installation.....</b>	<b>5-7</b>
○ Requirements.....	5
○ Vac Installation.....	6
○ Footprint and Dimensions.....	7
● <b>Timer setup.....</b>	<b>8-12</b>
○ SSAC Setup.....	8
○ IDX Setup.....	9
○ Infitec Setup.....	10
○ Timer Settings Chart.....	11
○ Typical Timer Settings.....	12
● <b>Maintenance.....</b>	<b>13</b>
● <b>Parts Breakdown.....</b>	<b>14-22</b>
○ 9200.....	14
○ 9200-1, 9200-1LD, 9200-3, 9200-3LD.....	15
○ 9209, 9209LD, 9209-6, 9209-6LD.....	16
○ 9210 & 9210LD.....	17
○ 9213 & 9213LD.....	18
○ 9220, 9230, 9230LD, 9230-3, 9230LD-3.....	19
○ 9240, 9250, 9250LD.....	20
○ 9260, 9270.....	21
○ Timers and Other Accessories.....	22
● <b>Schematics.....</b>	<b>23-31</b>
○ 9200, 9210, 9220, 9230, 9240, 9250.....	23
○ 9200-1.....	24
○ 9200-3.....	25
○ 9209.....	26
○ 9209-6.....	27
○ 9213.....	28
○ 9260 & 9270.....	29
○ Alternate Schematics – 2 Motor Vacs.....	30
○ Alternate Schematics – 3 Motor Vacs.....	31
● <b>Troubleshooting.....</b>	<b>32</b>

# **PRODUCT INFORMATION**

**Please take a moment to fill out the information below in order to aid us with any future sales or service inquiries. Model number and serial number information can be found on the serial tag located inside the control box and/or on the lower exterior of the can. Key number can be found on the tag that comes attached to the keys. There may be more than one key number depending on unit.**

**Please keep this information with your records.**

**MODEL#:**\_\_\_\_\_

**SERIAL#:**\_\_\_\_\_

**KEY NUMBER(S):**\_\_\_\_\_

**DATE PURCHASED:**\_\_\_\_\_

**DISTRIBUTOR:**\_\_\_\_\_

**J.E. Adams Industries  
1025 63<sup>rd</sup> Ave. S.W.  
Cedar Rapids, IA 52404  
1-800-553-8861  
[www.jeadams.com](http://www.jeadams.com)**

# SPECIFICATIONS

## 110V SPECIFICATIONS

HEIGHT: 54-1/2"  
 CANISTER DIAMETER: 19"  
 DOME DIAMETER: SMALL: 20"  
                             LARGE: 24"  
                             PLASTIC: 24"

TOTAL DEPTH -  
 REAR OF DOME TO  
 FRONT OF LOCK BOX: SMALL DOME: 27-1/8"  
                                     LARGE DOME: 29"  
                                     LIGHTED DOME: 29"

WEIGHT: 135-155 Lbs.  
 VACUUM:

2 MOTOR UNITS:  
     110/120 VAC, 50/60HZ  
     20 AMP DEDICATED SERVICE REQUIRED  
     4 BAG ACCESS FROM DOOR

3 MOTOR UNITS:  
     110/120 VAC, 50/60HZ  
     30 AMP DEDICATED SERVICE REQUIRED  
     4 BAG ACCESS FROM DOOR

MOTORS:  
     AMETEK UNIVERSAL TYPE, 50/60HZ  
     17,500-22,500 RPM  
     2 STAGE PERIPHERAL BYPASS DISCHARGE  
     UL RECOGNIZED CATEGORY  
     PRGY2(E47185)  
     CSA CERTIFIED, CLASS 1611 01(LR31393)

## 220V SPECIFICATIONS

HEIGHT: 54-1/2"  
 CANISTER DIAMETER: 19"  
 DOME DIAMETER: SMALL: 20"  
                             LARGE: 24"  
                             PLASTIC: 24"

TOTAL DEPTH -  
 REAR OF DOME TO  
 FRONT OF LOCK BOX: SMALL DOME: 27-1/8"  
                                     LARGE DOME: 29"  
                                     LIGHTED DOME: 29"

WEIGHT: 135-155 Lbs.  
 VACUUM:

2 MOTOR UNITS:  
     220VAC, 50/60HZ  
     10 AMP DEDICATED SERVICE REQUIRED  
     4 BAG ACCESS FROM DOOR

3 MOTOR UNITS:  
     110/120 VAC, 50/60HZ  
     15 AMP DEDICATED SERVICE REQUIRED  
     4 BAG ACCESS FROM DOOR

MOTORS:  
     AMETEK UNIVERSAL TYPE, 50/60HZ  
     17,500-22,500 RPM  
     2 STAGE PERIPHERAL BYPASS DISCHARGE  
     UL RECOGNIZED CATEGORY  
     PRGY2(E47185)  
     CSA CERTIFIED, CLASS 1611 01(LR31393)

**Table 1: 110V and 220V vac specifications**

# **INSTALLATION REQUIREMENTS**

## **!IMPORTANT!**

**TO ENSURE PROPER FUNCTIONALITY AND ADHERANCE TO BOTH LOCAL AND NATIONAL ELECTRIC CODES, IT IS RECOMMENDED THAT SERVICE BE INSTALLED BY A LICENCED ELECTRICIAN EXPERIENCED IN COMMERCIAL APPLICATIONS. INADEQUATE POWER AND WIRING MAY CAUSE THE UNIT TO PERFORM ERRATICALLY, BLOW FUSES AND TIME INCORRECTLY.**

### **GENERAL MECHANICAL:**

- ALL DIMENSIONS IN DRAWINGS ARE IN INCHES.
- MOUNTING STUD SIZE 3/8" X 16 UNC X 1".
- 4" MINIMUM CONCRETE REQUIRED AROUND MOUNTING STUD.
- 18" MINIMUM PAD RECOMMENDED FOR BUMPER CLEARANCE.

### **FOR GASOLINE DISPENSING LOCATIONS:**

- A MINIMUM 18" HIGH PAD ABOVE THE DRIVEWAY.
- 20 FOOT HORIZONTAL CLEARANCE FROM THE EXTERIOR ENCLOSURE OF ANY GASOLINE DISPENSING PUMP.

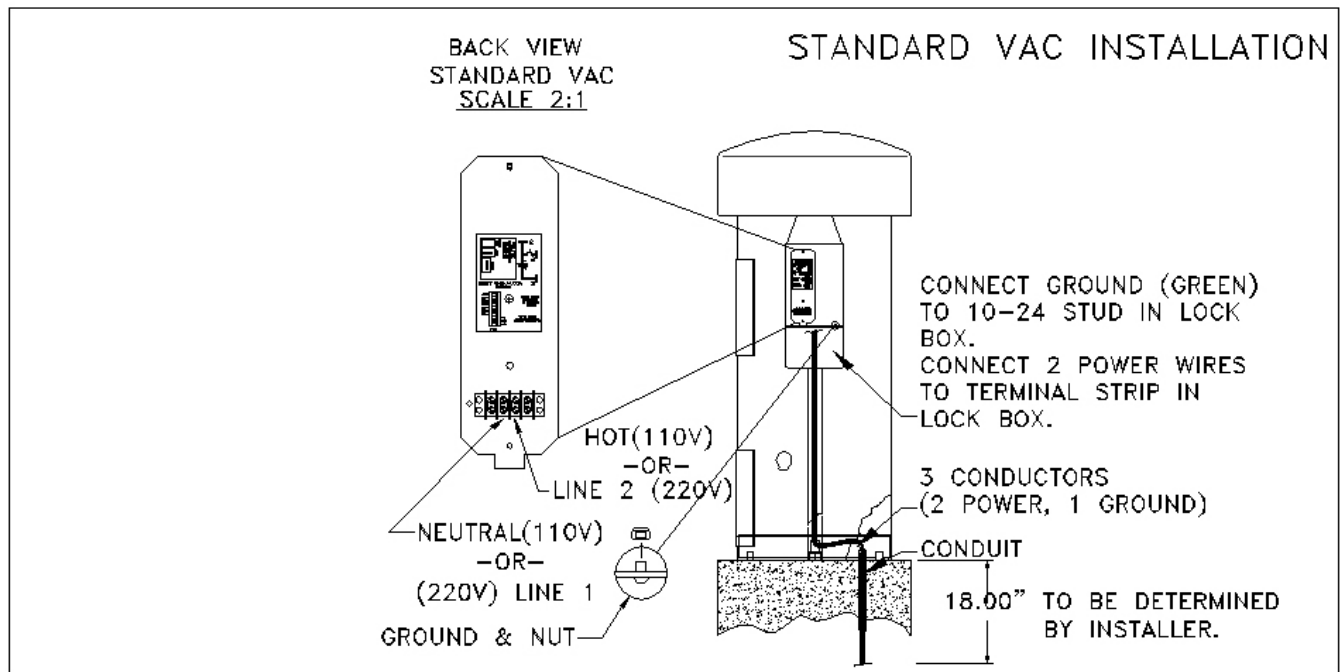
### **ELECTRICAL SERVICE:**

- **2 MOTOR VACS**
  - **120V VACS**
    - **20 AMP** DEDICATED SERVICE REQUIRED. **12 AWG MINIMUM** WIRE SIZE REQUIRED (50FT RUN OR LESS). WIRE SIZE WILL VARY WITH DISTANCE FROM THE SERVICE PANEL TO THE UNIT.
  - **220V VACS**
    - **10 AMP** DEDICATED SERVICE REQUIRED. **14 AWG MINIMUM** WIRE SIZE REQUIRED (50FT RUN OR LESS). . WIRE SIZE WILL VARY WITH DISTANCE FROM THE SERVICE PANEL TO THE UNIT.
- **3 MOTOR VACS**
  - **120V VACS**
    - **30 AMP** DEDICATED SERVICE REQUIRED. **10 AWG MINIMUM** WIRE SIZE REQUIRED (50FT RUN OR LESS). . WIRE SIZE WILL VARY WITH DISTANCE FROM THE SERVICE PANEL TO THE UNIT.
  - **220V VACS**
    - **15 AMP** DEDICATED SERVICE REQUIRED. **14 AWG MINIMUM** WIRE SIZE REQUIRED (50FT RUN OR LESS). . WIRE SIZE WILL VARY WITH DISTANCE FROM THE SERVICE PANEL TO THE UNIT.

# VAC INSTALLATION

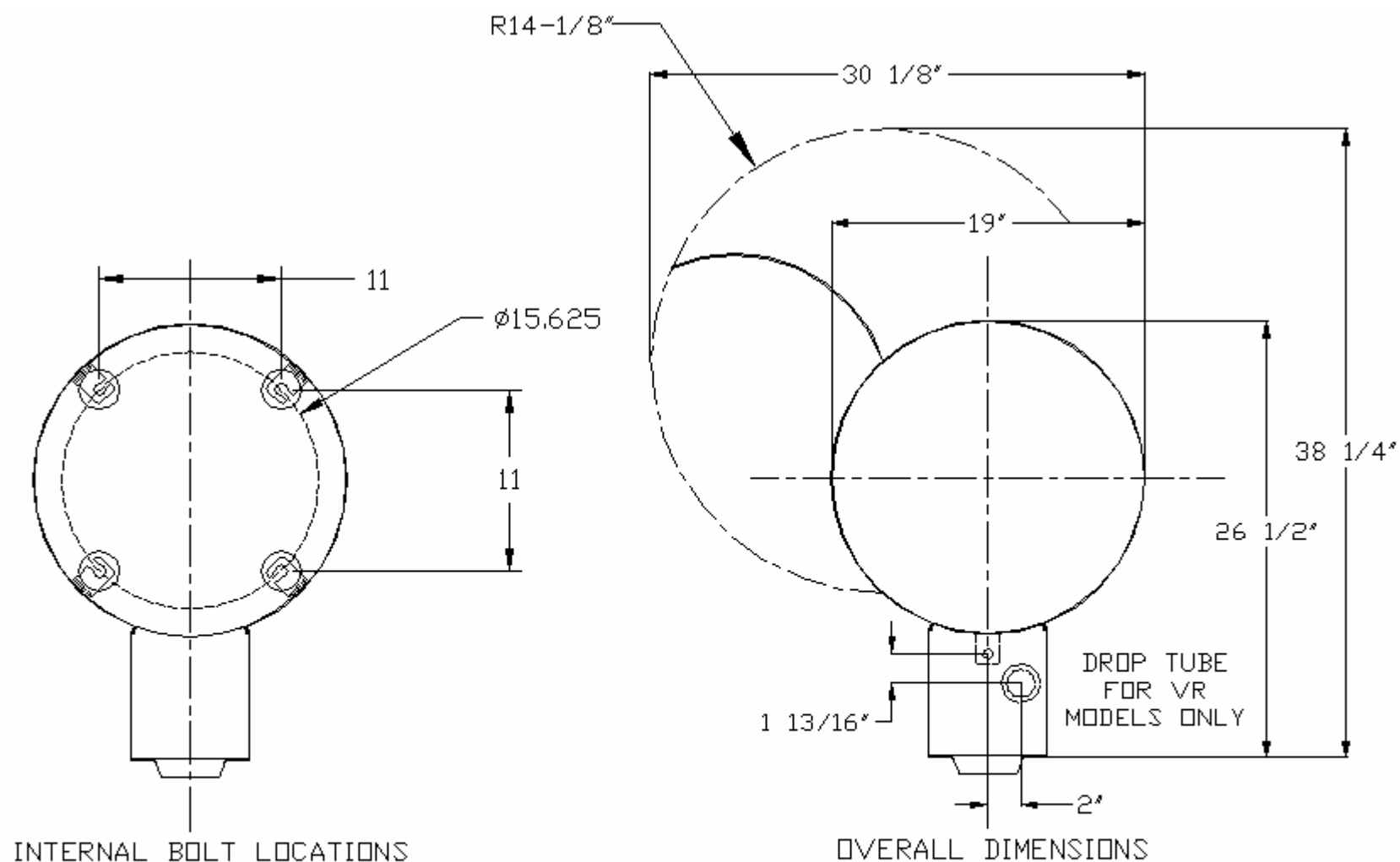
**IT IS HIGHLY RECOMMENDED** THAT THIS UNIT BE INSTALLED BY A LICENSED ELECTRICIAN to ensure all local and national electrical codes are adhered to.

1. Using the dimensions shown in Figure 2 (page 7), install the mounting studs.
2. Mount the unit securely and install electrical service as shown in Figure 1.
3. Set timer to desired time and coin settings (pages 8-12).
4. Remove vac hose from cleanout area and install into hose insert cutout. Hose will thread into the cutout in a reverse-threading motion (counter-clockwise).
5. Apply power to the unit and verify proper operation.



**Figure 1: Standard vac installation**

\*\*\*\* INTERNAL MOUNT IS STANDARD ON ALL J.E. ADAMS UNITS \*\*\*\*



**Figure 2: Installation footprint and vac dimensions**

**Use 5871B8 cap plugs to seal holes on internal mount unit once unit is installed. Plugs supplied with unit.**

## TIMER SETUP – SSAC TIMERS

*Note: “AE” and “AN” model SSAC timers are accumulating timers. During use, timing can be extended proportionately by adding more coins.*

The SSAC timer has two adjustable settings: Time per coin (in minutes) and number of coins to start.

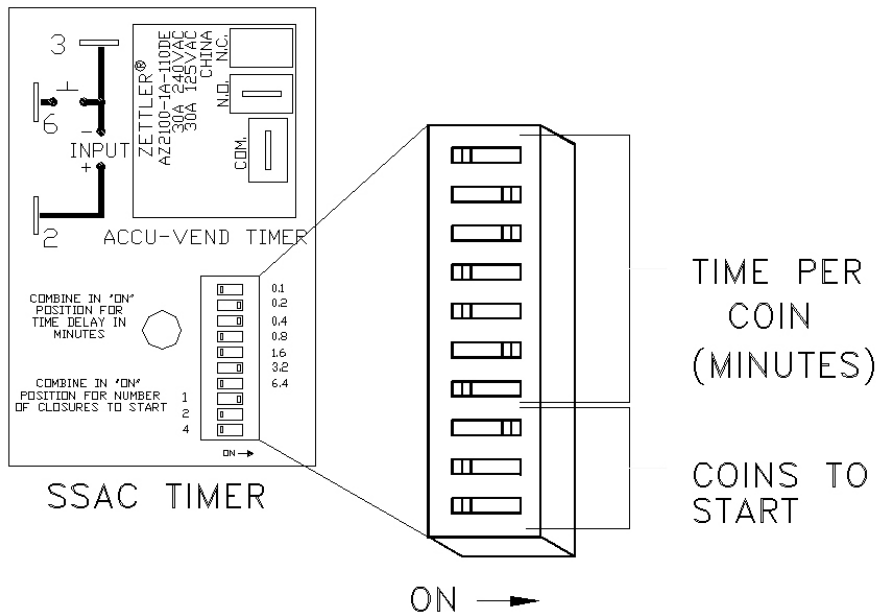
### Time per coin:

**Time per coin** is the amount of time the unit will run **per coin inserted** and can be set from *0.1 minutes (6 seconds)* to *12.7 minutes (12 minutes and 42 seconds)* in increments of 6 seconds by turning on the correct switches until their values equal the desired time. Refer to Tables 2 and 3 (pages 11-12) for standard timer and coin settings. For custom settings, follow the steps below:

1. Figure the total time your vac will run (in minutes) and divide that number by the number of **coins to start**. This is your **time per coin**. Round up or down to the nearest tenth of a minute.
2. Subtract the largest value switch (initially 6.4) from your **time per coin**.
  - a. **If the resulting number is zero**, move the switch to the “on” position and set all remaining un-set switches in the “off” position. Your timer is now set.
  - b. **If the resulting number is positive**, move the switch into the “on” position. Using the resulting number as your new **time per coin**, repeat step 2 with the next largest switch value.
  - c. **If the resulting number is negative**, set the switch in the “off” position and repeat step 2 using the next largest switch value.

### Coins to start:

**Coins to start** is the amount of coins needed to activate the timer and can be set from one to seven coins in increments of one coin. Refer to Table 2 (page 10) for switch settings



**Figure 3: SSAC timer setup**

*Figure 3 shows an SSAC timer set for 1 coin to start and 3.8 minutes per coin for a total run time of 3.8 minutes (3 minutes and 48 seconds).*



## TIMER SETUP – IDX TIMERS

*Note: IDX timers are accumulating timers. During use, timing can be extended proportionately by adding more coins.*

The IDX timer has two adjustable settings: Time per coin (in seconds) and number of coins to start.

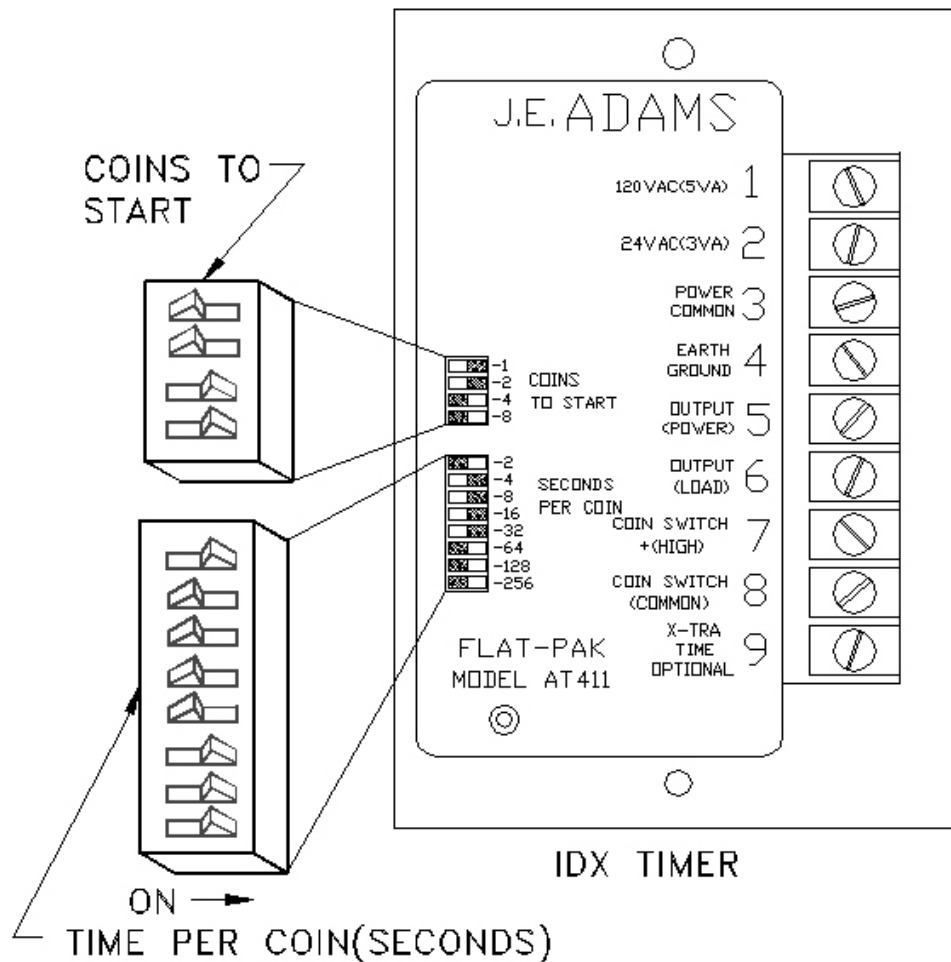
### Time per coin:

**Time per coin** is the amount of time the unit will run **per coin inserted** and can be set from 2 seconds to 510 seconds (8.5 minutes) in increments of 2 seconds by turning on the correct switches until their values equal the desired time. Refer to Tables 2 and 3 (pages 11-12) for standard timer and coin settings (*Note: IDX timers do not have 1 second or 512 second switches.* When configuring timer using Table 2, ignore settings for switches 1 and 512). For custom settings, follow the steps below:

- Figure the total time your vac will run (in seconds) and divide that number by the number of **coins to start**. This is your **time per coin**. Round up or down to the nearest even number.
- Subtract the largest value switch (initially 256) from your **time per coin**.
  - If the resulting number is zero**, move the switch to the “on” position and set all remaining un-set switches in the “off” position. Your timer is now set.
  - If the resulting number is positive**, move the switch into the “on” position. Using the resulting number as your new **time per coin**, repeat step 2 with the next largest switch value.
  - If the resulting number is negative**, set the switch in the “off” position and repeat step 2 using the next largest switch value.

### Coins to start:

**Coins to start** is the amount of coins needed to activate the timer and can be set from one to seven coins in increments of one coin. Refer to Table 2 (page 10) for switch settings.



**Figure 4: IDX timer setup**

Figure 4 shows an IDX timer set for 3 coins to start and 60 seconds per coin for a total run time of 3 minutes.

## TIMER SETUP – INFITEC TIMERS

The Infitec timer has two adjustable settings: Total run time (in seconds) and number of coins to start.

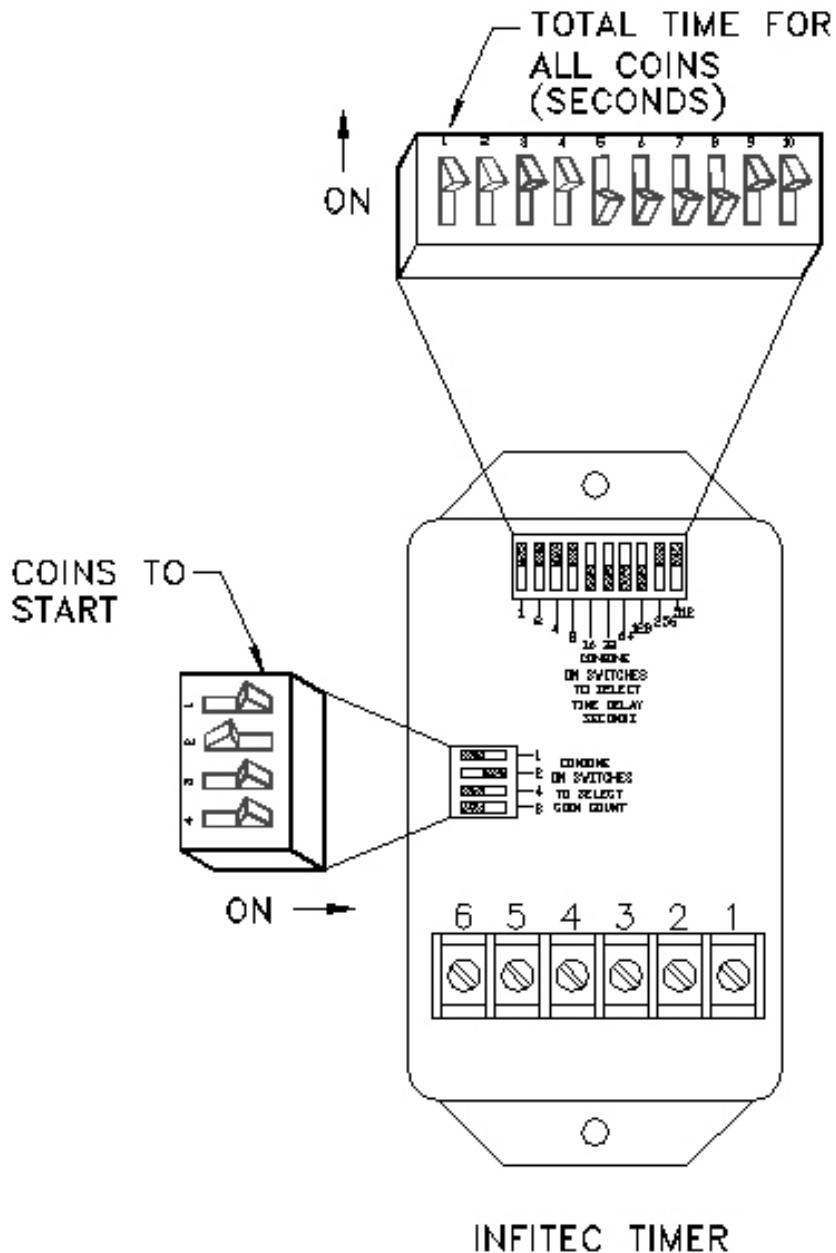
### Total run time:

**Total run time** is the amount of time the unit will run once activated and can be set from *1 second* to *1023 seconds (17 minutes and 3 seconds)* in increments of 1 second by turning on the correct switches until their values equal the desired time. Refer to Tables 2 and 3 (pages 11-12) for standard timer and coin settings. For custom settings, follow the steps below:

1. Figure the total time your vac will run (in seconds). This is your **total run time**. Round up or down as desired.
2. Subtract the largest value switch (initially 512) from your **total run time**.
  - a. **If the resulting number is zero**, move the switch to the “on” position and set all remaining un-set switches in the “off” position. Your timer is now set.
  - b. **If the resulting number is positive**, move the switch into the “on” position. Using the resulting number as your new **time per coin**, repeat step 2 with the next largest switch value.
  - c. **If the resulting number is negative**, set the switch in the “off” position and repeat step 2 using the next largest switch value.

### Coins to start:

**Coins to start** is the amount of coins needed to activate the timer and can be set from one to 15 coins in increments of one coin. Refer to Table 2 (page 10) for switch settings.



**Figure 5: Infitec timer setup**

Figure 5 shows an Infitec timer set for 2 coins to start and a total run time of 240 seconds (4 minutes).



IDX TIMER SETTINGS		
Amount to Start	Total Run Time	Switches in "On" Position
25¢	2 MIN	8, 16, 32, 64
25¢	2-1/2 MIN	2, 4, 16, 128
25¢	3 MIN	4, 16, 32, 128
25¢	3-1/2 MIN	2, 16, 64, 128
25¢	4 MIN	16, 32, 64, 128
25¢	4-1/2 MIN	2, 4, 8, 256
25¢	5 MIN	4, 8, 32, 256
25¢	5-1/2 MIN	2, 8, 64, 256
50¢	2 MIN	4, 8, 16, 32
50¢	2-1/2 MIN	4, 8, 64
50¢	3 MIN	2, 8, 16, 64
50¢	3-1/2 MIN	2, 8, 32, 64
50¢	4 MIN	8, 16, 32, 64
50¢	4-1/2 MIN	8, 128
50¢	5 MIN	2, 4, 16, 128
50¢	5-1/2 MIN	2, 4, 32, 128
75¢	2 MIN	8, 32
75¢	2-1/2 MIN	2, 16, 32
75¢	3 MIN	4, 8, 16, 32
75¢	3-1/2 MIN	2, 4, 64
75¢	4 MIN	16, 64
75¢	4-1/2 MIN	2, 8, 16, 64
75¢	5 MIN	4, 32, 64
75¢	5-1/2 MIN	2, 4, 8, 32, 64
\$1.00	2 MIN	2, 4, 8, 16
\$1.00	2-1/2 MIN	2, 4, 32
\$1.00	3 MIN	4, 8, 32
\$1.00	3-1/2 MIN	2, 4, 16, 32
\$1.00	4 MIN	4, 8, 16, 32
\$1.00	4-1/2 MIN	4, 64
\$1.00	5 MIN	4, 8, 64
\$1.00	5-1/2 MIN	4, 16, 64

SSAC TIMER SETTINGS		
Amount to Start	Total Run Time	Switches in "On" Position
25¢	2 MIN	0.4, 1.6
25¢	2-1/2 MIN	0.1, 0.8, 1.6
25¢	3 MIN	0.2, 0.4, 0.8, 1.6
25¢	3-1/2 MIN	0.1, 0.2, 3.2
25¢	4 MIN	0.8, 3.2
25¢	4-1/2 MIN	0.1, 0.4, 0.8, 3.2
25¢	5 MIN	0.2, 1.6, 3.2
25¢	5-1/2 MIN	0.1, 0.2, 0.4, 1.6, 3.2
50¢	2 MIN	0.2, 0.8
50¢	2-1/2 MIN	*
50¢	3 MIN	0.1, 0.2, 0.4, 0.8
50¢	3-1/2 MIN	*
50¢	4 MIN	0.4, 1.6
50¢	4-1/2 MIN	*
50¢	5 MIN	0.1, 0.8, 1.6
50¢	5-1/2 MIN	*
75¢	2 MIN	*
75¢	2-1/2 MIN	*
75¢	3 MIN	0.2, 0.8
75¢	3-1/2 MIN	*
75¢	4 MIN	*
75¢	4-1/2 MIN	*
75¢	5 MIN	*
75¢	5-1/2 MIN	*
\$1.00	2 MIN	0.1, 0.4
\$1.00	2-1/2 MIN	*
\$1.00	3 MIN	*
\$1.00	3-1/2 MIN	*
\$1.00	4 MIN	0.2, 0.8
\$1.00	4-1/2 MIN	*
\$1.00	5 MIN	*
\$1.00	5-1/2 MIN	*

INFITEC TIMER SETTINGS		
Amount to Start	Total Run Time	Switches in "On" Position
25¢	2 MIN	8, 16, 32, 64
25¢	2-1/2 MIN	2, 4, 16, 128
25¢	3 MIN	4, 16, 32, 128
25¢	3-1/2 MIN	2, 16, 64, 128
25¢	4 MIN	16, 32, 64, 128
25¢	4-1/2 MIN	2, 4, 8, 256
25¢	5 MIN	4, 8, 32, 256
25¢	5-1/2 MIN	2, 8, 64, 256
50¢	2 MIN	8, 16, 32, 64
50¢	2-1/2 MIN	2, 4, 16, 128
50¢	3 MIN	4, 16, 32, 128
50¢	3-1/2 MIN	2, 16, 64, 128
50¢	4 MIN	16, 32, 64, 128
50¢	4-1/2 MIN	2, 4, 8, 256
50¢	5 MIN	4, 8, 32, 256
50¢	5-1/2 MIN	2, 8, 64, 256
75¢	2 MIN	8, 16, 32, 64
75¢	2-1/2 MIN	2, 4, 16, 128
75¢	3 MIN	4, 16, 32, 128
75¢	3-1/2 MIN	2, 16, 64, 128
75¢	4 MIN	16, 32, 64, 128
75¢	4-1/2 MIN	2, 4, 8, 256
75¢	5 MIN	4, 8, 32, 256
75¢	5-1/2 MIN	2, 8, 64, 256
\$1.00	2 MIN	8, 16, 32, 64
\$1.00	2-1/2 MIN	2, 4, 16, 128
\$1.00	3 MIN	4, 16, 32, 128
\$1.00	3-1/2 MIN	2, 16, 64, 128
\$1.00	4 MIN	16, 32, 64, 128
\$1.00	4-1/2 MIN	2, 4, 8, 256
\$1.00	5 MIN	4, 8, 32, 256
\$1.00	5-1/2 MIN	2, 8, 64, 256

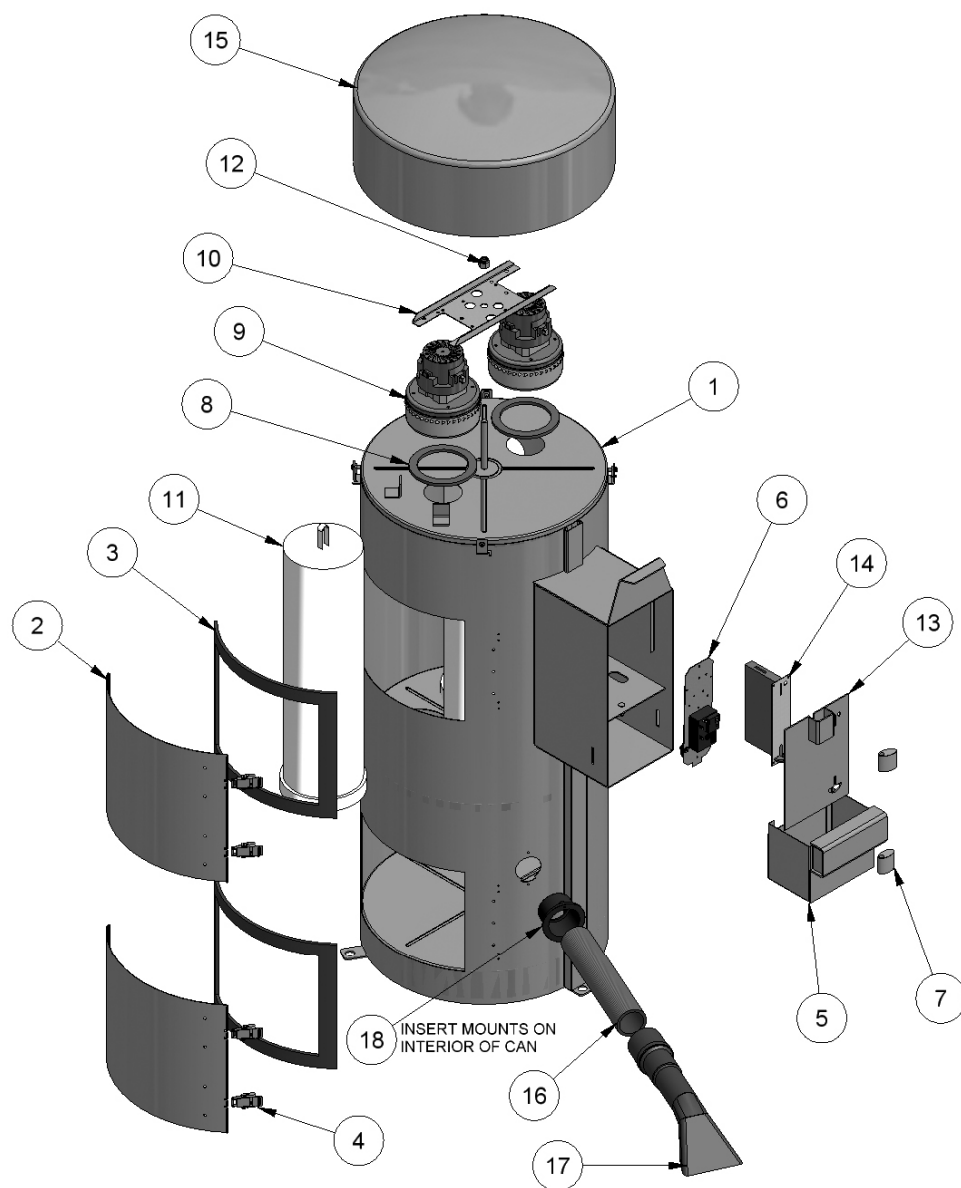
**Table 3: Typical Timer Settings**

*Note: “\*” denotes a configuration that is not possible with this timer. See Table 2 for the closest approximation to this time.*

# **MAINTENANCE**

- Shake the dirt from the filter bags weekly. If possible, machine wash bags monthly. Hang bags until dry. DO NOT machine dry bags.
- Remove dirt and debris from the canister as required.
- Check vac hose and nozzle periodically for signs of wear or damage and replace them as needed.
- Check door and motor gaskets periodically for signs of wear or damage and replace them as needed.
- Clean the outside portion of the canister with a stainless steel polish. DO NOT use any abrasive cleaners, steel wool or any kind of brush to clean the exterior. Doing so could possibly scratch or damage the finish of the canister.
- Mild soap and water may be used to clean the decals. DO NOT use any harsh or abrasive cleaners or the decal surface may be damaged.
- Dome lights on LD models should be replaced with 13 Watt compact fluorescent lights. DO NOT use a light rated greater than 13 watts. When replacing dome lights, turn off power to the unit before removing dome.

# EXPLODED VIEW: STANDARD 9200 CONFIGURATION



## BILL OF MATERIALS

ITEM	PART NUMBER	DESCRIPTION	QTY
1	9201W	CAN W/C 2DR VAC ECONO/PIN	1
2	8615-5W	CLEANOUT DOOR WELDMENT	2
3	8159	DOOR GASKET	2
4	8153-1	LATCH, CLEANOUT DOOR	4
5	8204RW	WELDMENT, COIN BOX	1
6	8221SS4	TIMER ASSY, 110 SSAC	1
7	8638	PIN LOCK	2
8	8057	MOTOR GASKET	2
9	8055	MOTOR, AMETEK 115V	2
10	8051G	BRACKET, MOTOR MOUNT	1
11	8076	FILTER BAG	4
12	5603D11	1/2 Std NC Nylock Nut	1
13	8211RW	FACEPLATE WELDMENT, R.H	1
14	8149	IMONEX COIN ACCEPTOR	1
15	8101	DOVE ECONO-CLASS VAC - SMALL DOME	1
16	2036	HOSE, 2" X 15' BLACK VACUUM	1
17	2058	CLAW/CUFF ASSEMBLY, 2"	1
18	8615-7	INLET TUBE	1

THIS DOCUMENT SHALL NOT BE REPRODUCED NOR SHALL THE INFORMATION THEREIN BE USED BY OR DISCLOSED TO OTHERS EXCEPT AS AUTHORIZED BY J.E. ADAMS INDUSTRIES

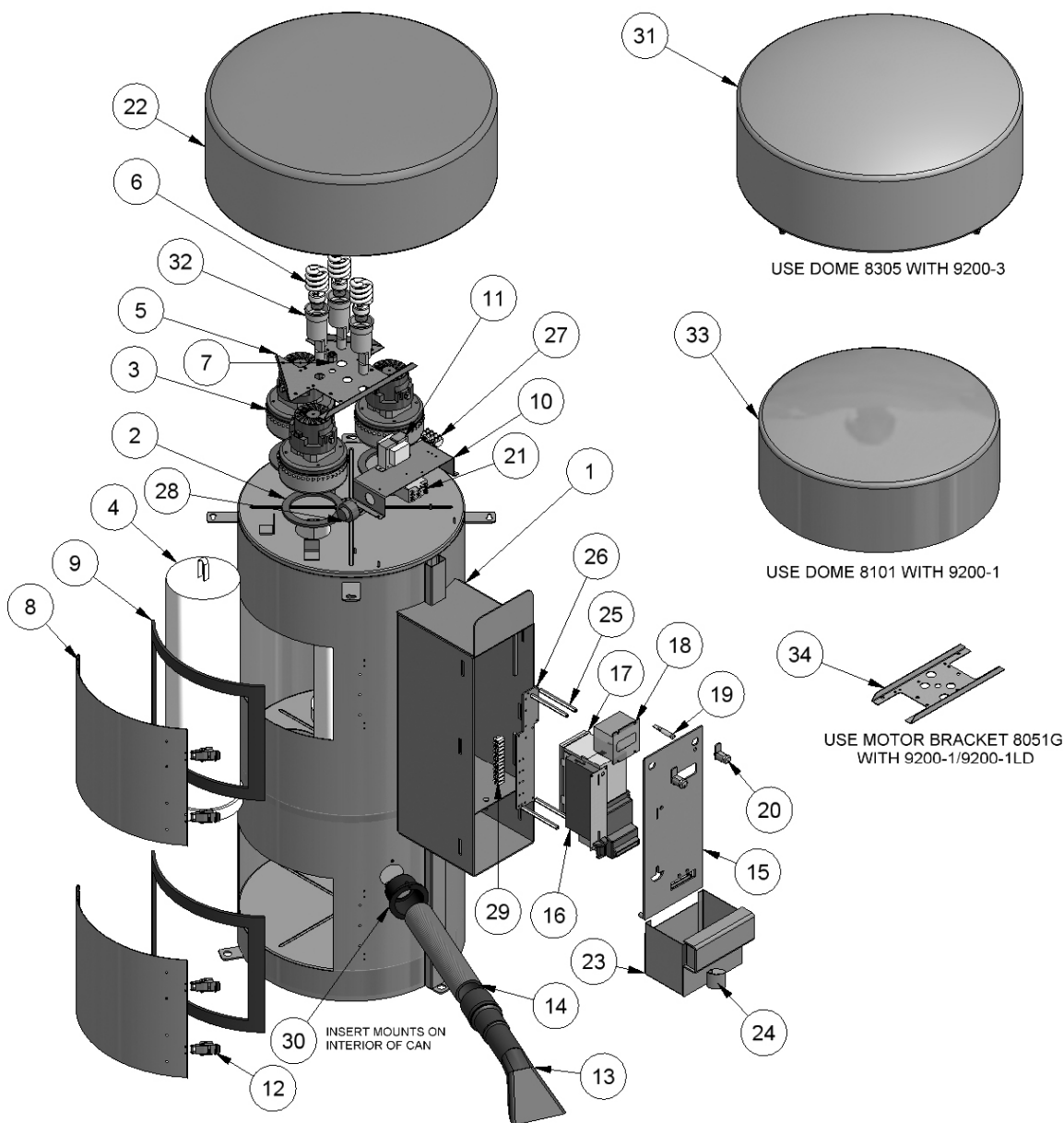


PART NO.

9200

# EXPLODED VIEW: 9200-3LD STANDARD CONFIGURATION

- FOR 9200-3 SUBTRACT ITEMS 6, 22, 32 AND USE 8305 DOME (ITEM 31)
- FOR 9200-1 SUBTRACT ITEMS 5, 6, 22, 32 AND REPLACE WITH ITEMS 33 AND 34
- FOR 9200-1LD REPLACE ITEM 5 WITH ITEM 34



BILL OF MATERIALS			
ITEM	PART NUMBER	DESCRIPTION	QTY
1	9201W6	CAN WELDMENT, VALI BOX, 3M	1
2	8057	MOTOR GASKET	3
3	8055	MOTOR, AMETEK 115V	3
4	8076	FILTER BAG	4
5	8051-3M	3 MOTOR BRACKET	1
6	8925	13 WATT LAMP	3
7	5603D11	1/2 Std NC Nylock Nut	1
8	8615-5W	CLEANOUT DOOR WELDMENT	2
9	8159	DOOR GASKET	2
10	9200-10	BRACKET, 9200 W/VALIDATOR	1
11	8131-2	TRANSFORMER, 110/220-24 1.66A	1
12	8153-1	LATCH, CLEANOUT DOOR	4
13	2058	CLAW/CUFF ASSEMBLY, 2"	1
14	2036	HOSE, 2" X 15' BLACK VACUUM	1
15	8900-7VW	FACEPLATE WELDMENT, W/VALI	1
16	8149	IMONEX COIN ACCEPTOR	1
17	8130-6	MARS BILL VALIDATOR, 110V	1
18	8000-10	DIXMOR DISPLAY TIMER	1
19	5913D8	LAMP, PANEL MT-3/8, 12V,LED, GRN	1
20	8953	MEDECO CAM LOCK W/2 KEYS	2
21	8761	RELAY, DPDT-24VAC-20A@1HP	1
22	8306	24" PLASTIC DOME	1
23	8204RW	WELDMENT, COIN BOX	1
24	8638	PIN LOCK	1
25	5000D5	STAND-OFF, 6-32	4
26	8900-82	TERMINAL BRACKET, VAC-SCENT	1
27	5944D004	TERMINAL STRIP, C-60 SERIES, 4 POLE	1
28	8000-11	ALARM, LAST COIN ALERT	1
29	5944D003	TERMINAL STRIP, 12 POLE	1
30	8615-7	INLET TUBE	1
31	8305	24" STAINLESS STEEL DOME	1
32	5917D1	LAMP BASE	3
33	8101	20" STAINLESS STEEL DOME	1
34	8051G	2 MOTOR BRACKET	1

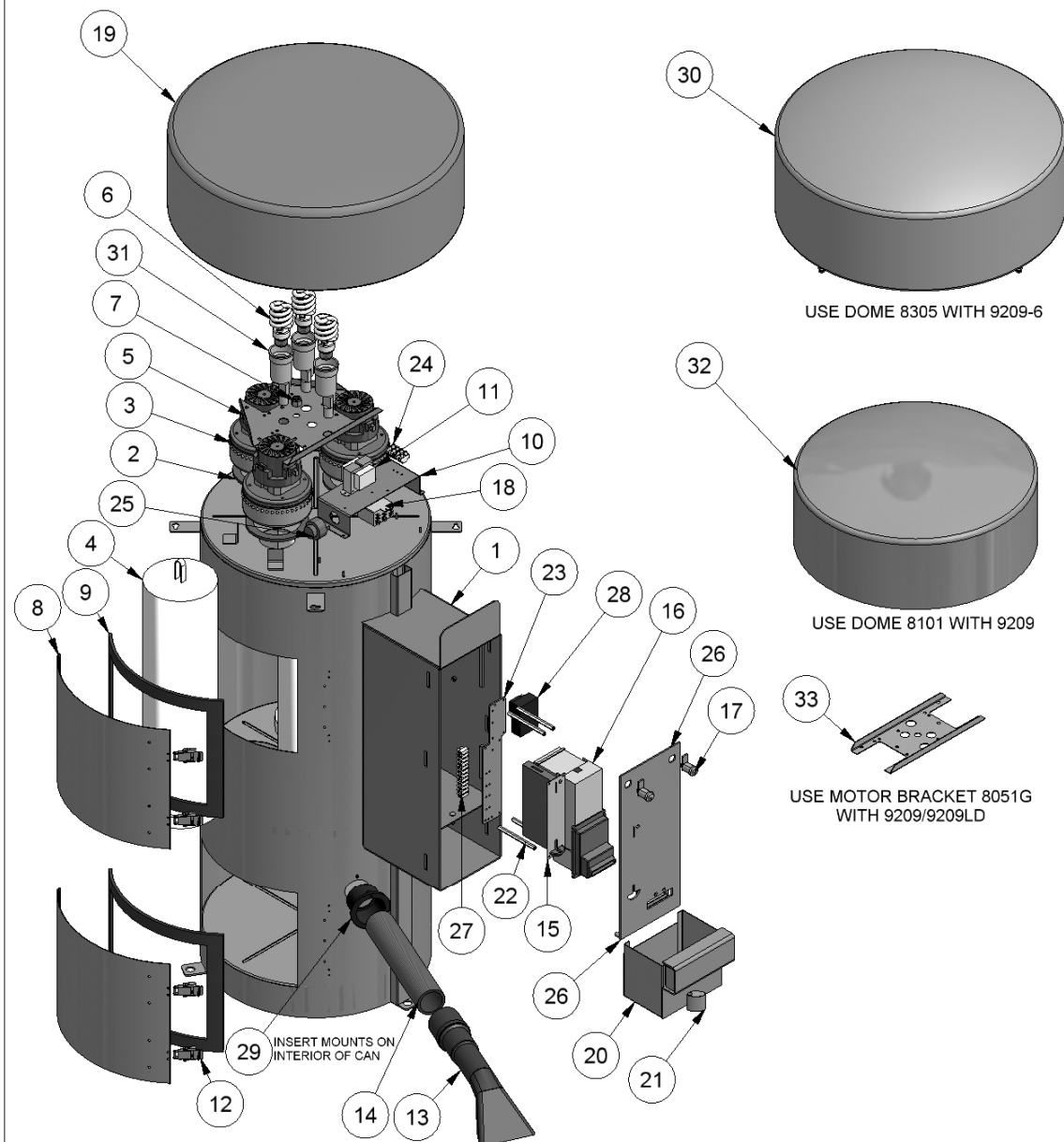
THIS DOCUMENT SHALL NOT BE REPRODUCED NOR SHALL THE INFORMATION THEREIN BE USED BY OR DISCLOSED TO OTHERS EXCEPT AS AUTHORIZED BY J.E. ADAMS INDUSTRIES



PART NO. 9200-3LD

# EXPLODED VIEW: 9209-6LD STANDARD CONFIGURATION

- FOR 9209-6 SUBTRACT ITEMS 6, 19, 31 AND USE 8305 DOME (ITEM 30)
- FOR 9209LD REPLACE ITEM 5 WITH ITEM 33
- FOR 9209 SUBTRACT ITEMS 5, 6, 19, 31 AND REPLACE WITH ITEMS 32 AND 33



BILL OF MATERIALS			
ITEM	PART NUMBER	DESCRIPTION	QTY
1	9201W6	CAN WELDMENT, VALI BOX, 3M	1
2	8057	MOTOR GASKET	3
3	8055	MOTOR, AMETEK 115V	3
4	8076	FILTER BAG	4
5	8051-3M	3 MOTOR BRACKET	1
6	8925	13 WATT LAMP	3
7	5603D11	1/2 Std NC Nylock Nut	1
8	8615-5W	CLEANOUT DOOR WELDMENT	2
9	8159	DOOR GASKET	2
10	9200-10	BRACKET, 9200 W/VALIDATOR	1
11	8131-2	TRANSFORMER, 110/220-24 1.66A	1
12	8153-1	LATCH, CLEANOUT DOOR	4
13	2058	CLAW/CUFF ASSEMBLY, 2"	1
14	2036	HOSE, 2" X 15' BLACK VACUUM	1
15	8149	IMONEX COIN ACCEPTOR	1
16	8130-6	MARS BILL VALIDATOR, 110V	1
17	8953	MEDECO CAM LOCK W/2 KEYS	2
18	8761	RELAY, DPDT-24VAC-20A@1HP	1
19	8306	24" PLASTIC DOME	1
20	8204RW	WELDMENT, COIN BOX	1
21	8638	PIN LOCK	1
22	5000D5	STAND-OFF, 6-32	4
23	8900-82	TERMINAL BRACKET, VAC-SCENT	1
24	5944D004	TERMINAL STRIP, C-60 SERIES, 4 POLE	1
25	8000-11	ALARM, LAST COIN ALERT	1
26	9209-2W	FACEPLATE WELDMENT	1
27	5944D003	TERMINAL STRIP, 12 POLE	1
28	8712SS4	SSAC TIMER	1
29	8615-7	INLET TUBE	1
30	8305	24" STAINLESS STEEL DOME	1
31	5917D1	LAMP BASE	3
32	8101	20" STAINLESS STEEL DOME	1
33	8051G	2 MOTOR BRACKET	1

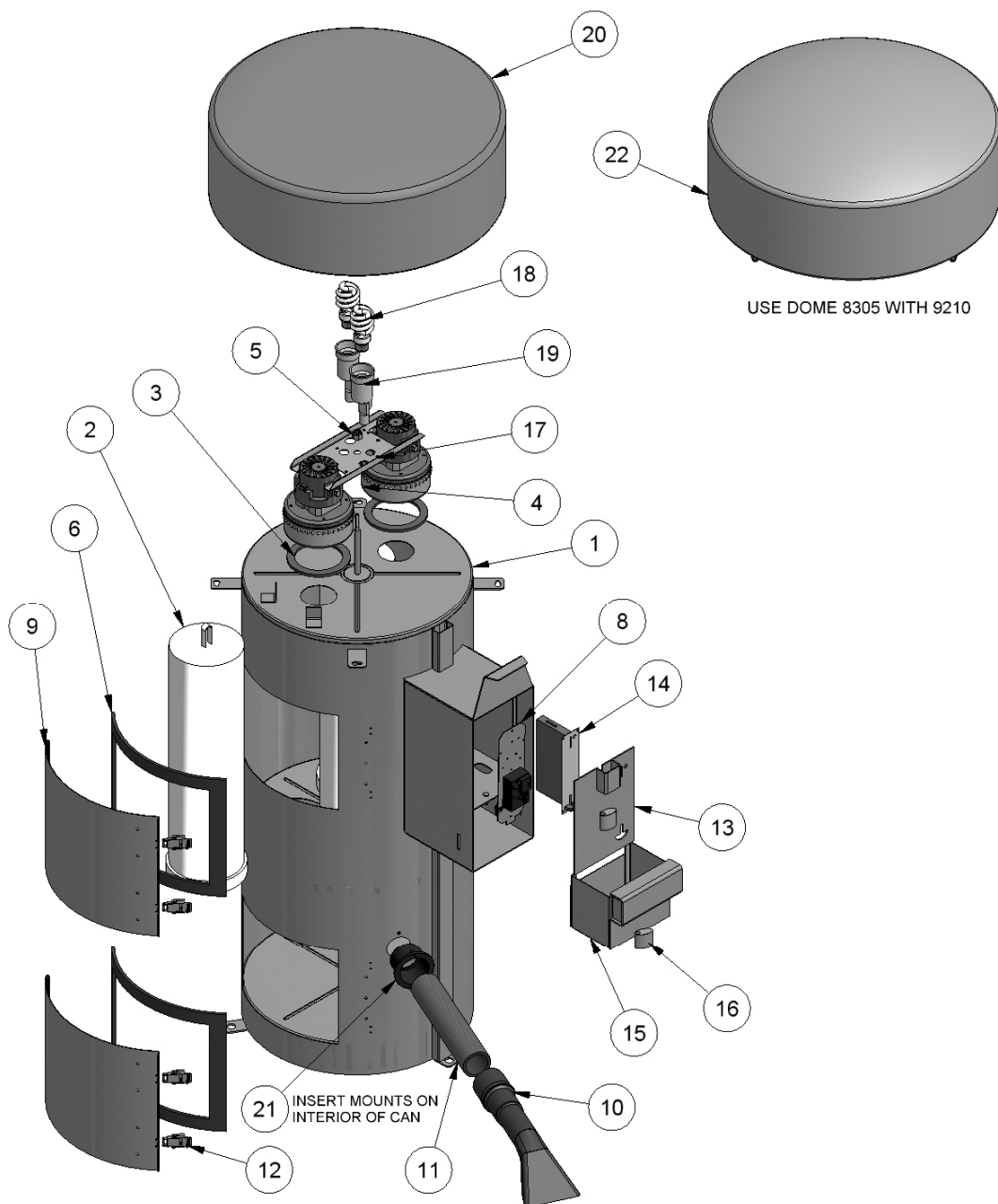
THIS DOCUMENT SHALL NOT BE REPRODUCED NOR SHALL THE INFORMATION THEREIN BE USED BY OR DISCLOSED TO OTHERS EXCEPT AS AUTHORIZED BY J.E. ADAMS INDUSTRIES



PART NO. 9209-6LD

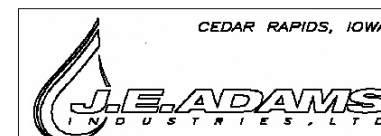


**EXPLODED VIEW: 9210LD STANDARD CONFIGURATION**  
**- FOR 9210 SUBTRACT ITEMS 18, 19, 20 AND USE 8305 DOME (ITEM 22)**



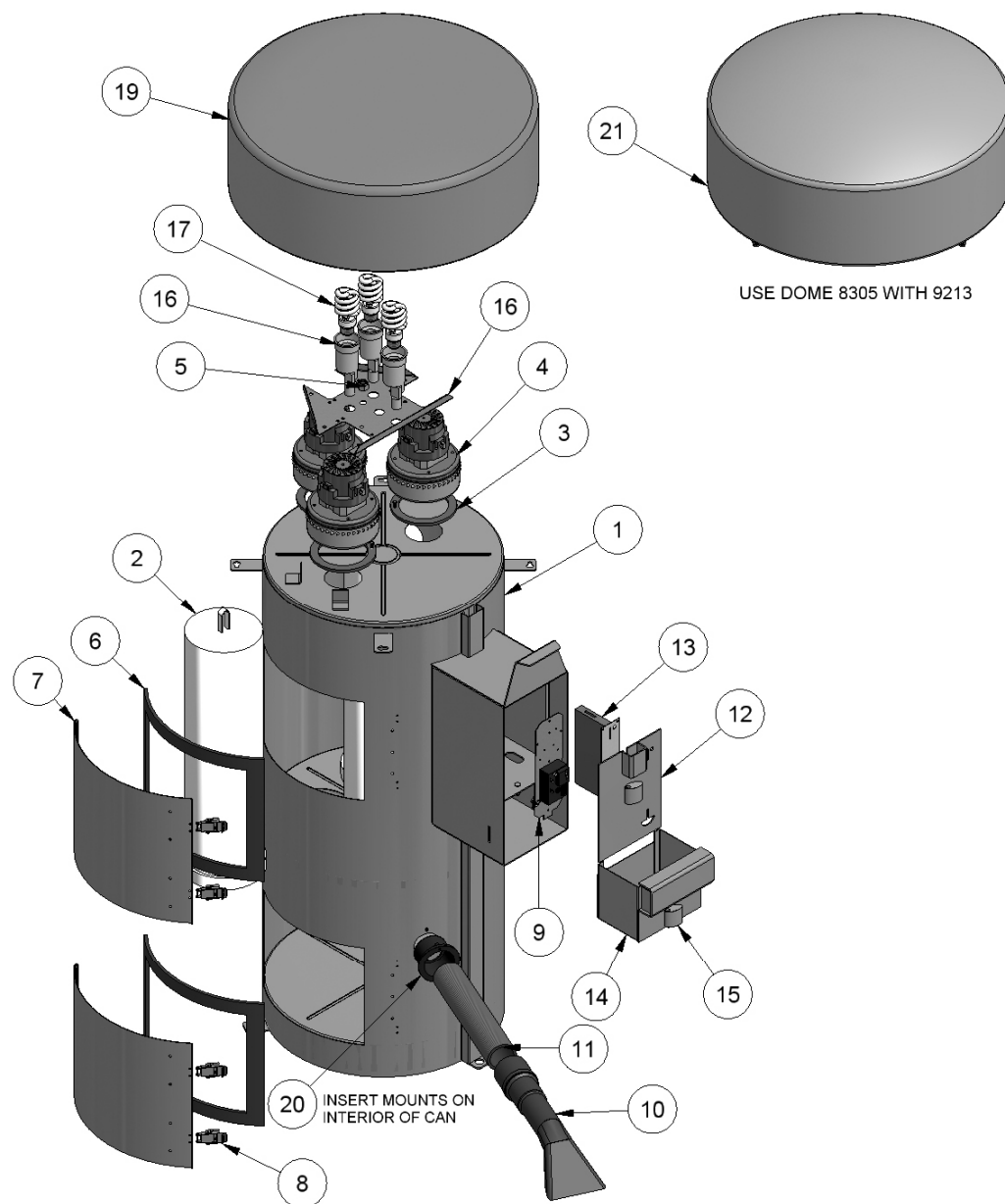
BILL OF MATERIALS			
ITEM	PART NUMBER	DESCRIPTION	QTY
1	9211W	VAC CANISTER W/C	1
2	8076	FILTER BAG	4
3	8057	MOTOR GASKET	2
4	8055	MOTOR, AMETEK 115V	2
5	5603D11	1/2 Std NC Nylock Nut	1
6	8159	DOOR GASKET	2
7	5639D4	RUBBER GROMMET	1
8	8221SS4	TIMER ASSY, 110 SSAC	1
9	8615-5W	CLEANOUT DOOR WELDMENT	2
10	2058	CLAW/CUFF ASSEMBLY, 2"	1
11	2036	HOSE, 2" X 15' BLACK VACUUM	1
12	8153-1	LATCH, CLEANOUT DOOR	4
13	8211RW	FACEPLATE WELDMENT, R.H	1
14	8149	IMONEX COIN ACCEPTOR	1
15	8204RW	WELDMENT, COIN BOX	1
16	8638	PIN LOCK	2
17	8051G	2 MOTOR BRACKET	1
18	8925	LIGHT	2
19	5917D1	LAMP BASE	2
20	8306	24" PLASTIC DOME	1
21	8615-7	INLET TUBE	1
22	8305	24" STAINLESS STEEL DOME	1

THIS DOCUMENT SHALL NOT BE REPRODUCED NOR SHALL THE INFORMATION THEREIN BE  
 USED BY OR DISCLOSED TO OTHERS EXCEPT AS AUTHORIZED BY J.E. ADAMS INDUSTRIES



PART  
NO. 9210/9210LD

EXPLODED VIEW: 9213LD STANDARD CONFIGURATION  
- FOR 9213 SUBTRACT ITEMS 17, 18, 19 AND USE 8305 DOME (ITEM 21)



BILL OF MATERIALS			
ITEM	PART NUMBER	DESCRIPTION	QTY
1	9214W	VAC CANISTER W/C, 3 MOTOR	1
2	8076	FILTER BAG	4
3	8057	MOTOR GASKET	3
4	8055	MOTOR, AMETEK 115V	3
5	5603D11	1/2 Std NC Nylock Nut	1
6	8159	DOOR GASKET	2
7	8615-5W	CLEANOUT DOOR WELDMENT	2
8	8153-1	LATCH, CLEANOUT DOOR	4
9	8221SS4	TIMER ASSY, 110 SSAC 3 MOTOR	1
10	2058	CLAW/CUFF ASSEMBLY, 2"	1
11	2036	HOSE, 2" X 15' BLACK VACUUM	1
12	8211RW	FACEPLATE WELDMENT, R.H	1
13	8149	IMONEX COIN ACCEPTOR	1
14	8204RW	WELDMENT, COIN BOX	1
15	8638	PIN LOCK	2
16	8051-3M	3 MOTOR BRACKET	1
17	8925	LIGHT	3
18	5917D1	LAMP BASE	3
19	8306	24" PLASTIC DOME	1
20	8615-7	INLET TUBE	1
21	8305	24" STAINLESS STEEL DOME	1

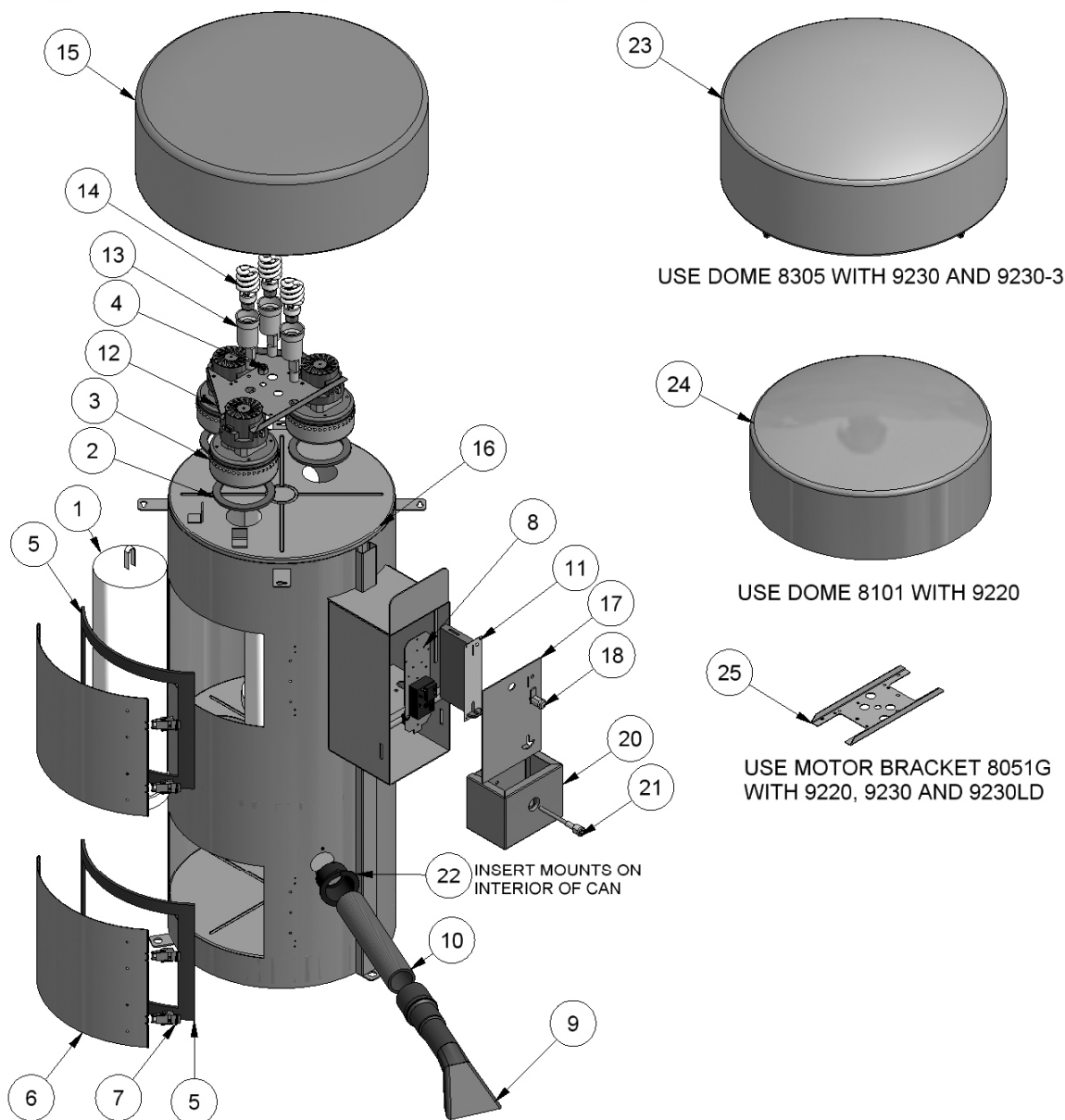
THIS DOCUMENT SHALL NOT BE REPRODUCED NOR SHALL THE INFORMATION THEREIN BE  
USED BY OR DISCLOSED TO OTHERS EXCEPT AS AUTHORIZED BY J.E. ADAMS INDUSTRIES



PART  
NO. 9213/9213LD

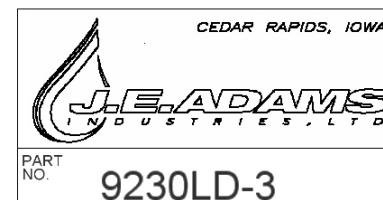
# EXPLODED VIEW: 9230LD-3 STANDARD CONFIGURATION

- FOR 9230-3 SUBTRACT ITEMS 13, 14, 15 AND USE 8305 DOME (ITEM 23)
- FOR 9230LD REPLACE ITEM 12 WITH ITEM 25
- FOR 9230 SUBTRACT ITEMS 12, 13, 14, 15 AND USE ITEMS 23 AND 25
- FOR 9220 SUBTRACT ITEMS 12, 13, 14, 15 AND USE ITEMS 24 AND 25



BILL OF MATERIALS			
ITEM	PART NUMBER	DESCRIPTION	QTY
1	8076	FILTER BAG	4
2	8057	MOTOR GASKET	3
3	8055	MOTOR, AMETEK 115V	3
4	5603D11	1/2 Std NC Nylock Nut	1
5	8159	DOOR GASKET	2
6	8615-5W	CLEANOUT DOOR WELDMENT	2
7	8153-1	LATCH, CLEANOUT DOOR	4
8	8221SS4	TIMER ASSY, 110 SSAC 3 MOTOR	1
9	2058	CLAW/CUFF ASSEMBLY, 2"	1
10	2036	HOSE, 2" X 15' BLACK VACUUM	1
11	8149	IMONEX COIN ACCEPTOR	1
12	8051-3M	3 MOTOR BRACKET	1
13	5917D1	LAMP BASE	3
14	8925	13 WATT COMPACT FLOURESCENT LAMP	3
15	8306	24" PLASTIC DOME	1
16	9231-1W	VAC CANISTER W/C 3M	1
17	8952W	FACEPLATE WELDMENT, CAM LOCK	1
18	8953	MEDECO CAM LOCK W/2 KEYS	1
19	5644D1	CAGE NUT	1
20	8954W	COIN BOX WELDMENT, SCREW LOCK	1
21	8955	MEDECO SCREW LOCK	1
22	8615-7	HOSE INSERT	1
23	8305	24" STAINLESS STEEL DOME	1
24	8101	20" STAINLESS STEEL DOME	1
25	8051G	2 MOTOR BRACKET	1

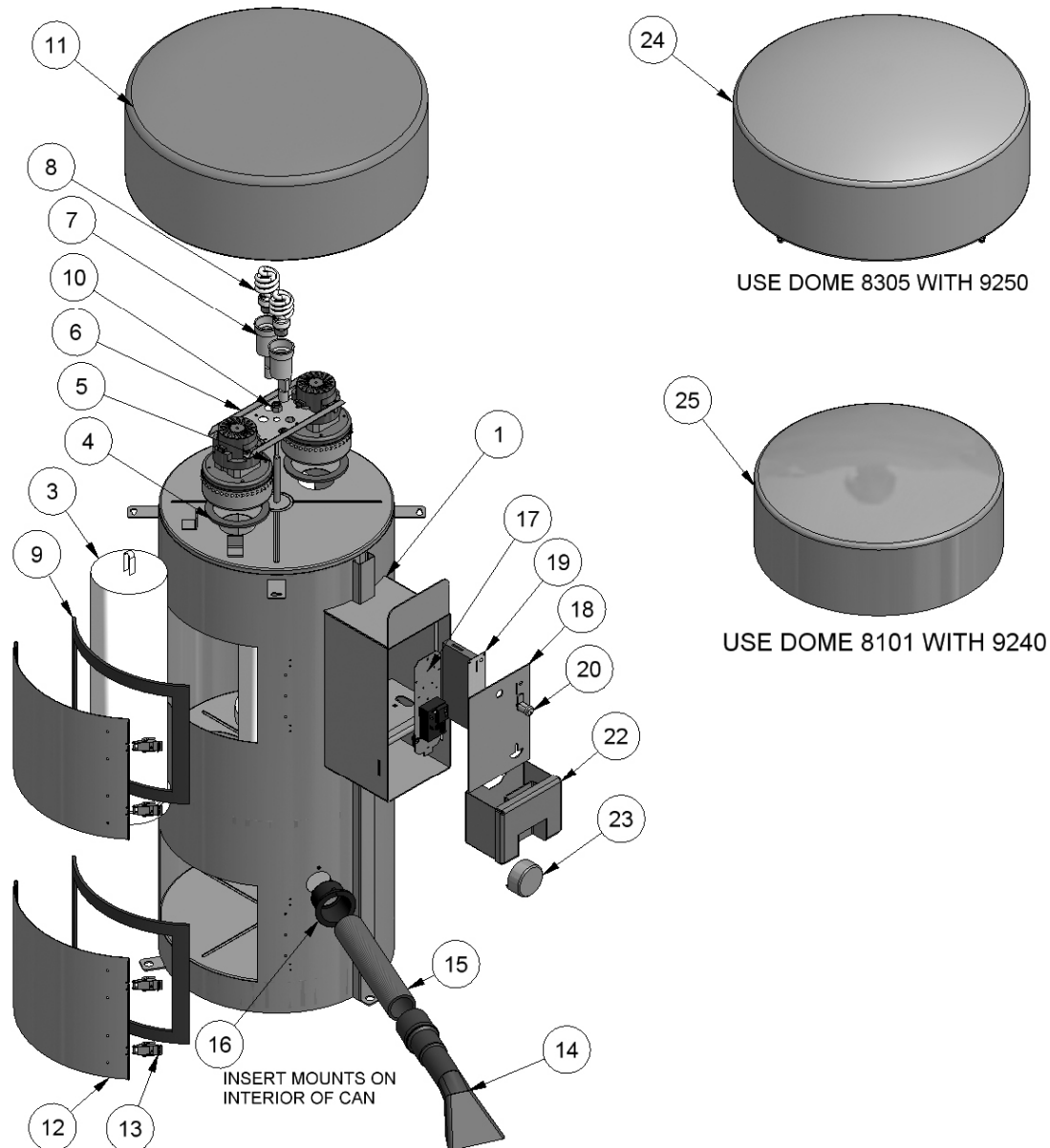
THIS DOCUMENT SHALL NOT BE REPRODUCED NOR SHALL THE INFORMATION THEREIN BE USED BY OR DISCLOSED TO OTHERS EXCEPT AS AUTHORIZED BY J.E. ADAMS INDUSTRIES



# EXPLODED VIEW: 9250LD STANDARD CONFIGURATION

- FOR 9250 SUBTRACT ITEMS 7, 8, 11 AND USE 8305 DOME (ITEM 24)

- FOR 9240 SUBTRACT ITEMS 7, 8, 11 AND USE 8101 DOME (ITEM 25)



BILL OF MATERIALS			
ITEM	PART NUMBER	DESCRIPTION	QTY
1	9231W	VAC CANISTER W/C	1
2	9114	LOCK HASP, BOLT ON	1
3	8076	FILTER BAG	4
4	8057	MOTOR GASKET	2
5	8055	MOTOR, AMETEK 115V	2
6	8051G	2 MOTOR BRACKET	1
7	5917D1	LAMP BASE	2
8	8925	13 WATT COMPACT FLOURESCENT LAMP	2
9	8159	DOOR GASKET	2
10	5603D11	1/2 Std NC Nylock Nut	1
11	8306	24" PLASTIC DOME	1
12	8615-5W	CLEANOUT DOOR WELDMENT	2
13	8153-1	LATCH, CLEANOUT DOOR	4
14	2058	CLAW/CUFF ASSEMBLY, 2"	1
15	2036	HOSE, 2" X 15' BLACK VACUUM	1
16	8615-7	INLET TUBE	1
17	8221SS4	TIMER ASSY, 110 SSAC	1
18	8952W	FACEPLATE WELDMENT, CAM LOCK	1
19	8149	IMONEX COIN ACCEPTOR	1
20	8953	MEDECO CAM LOCK W/2 KEYS	1
21	8928	SPACER, LOCK	1
22	9113W	COIN BOX WELDMENT	1
23	8920-1T	AMERICAN 2000 LOCK	1
24	8305	24" STAINLESS STEEL DOME	1
25	8101	20" STAINLESS STEEL DOME	1

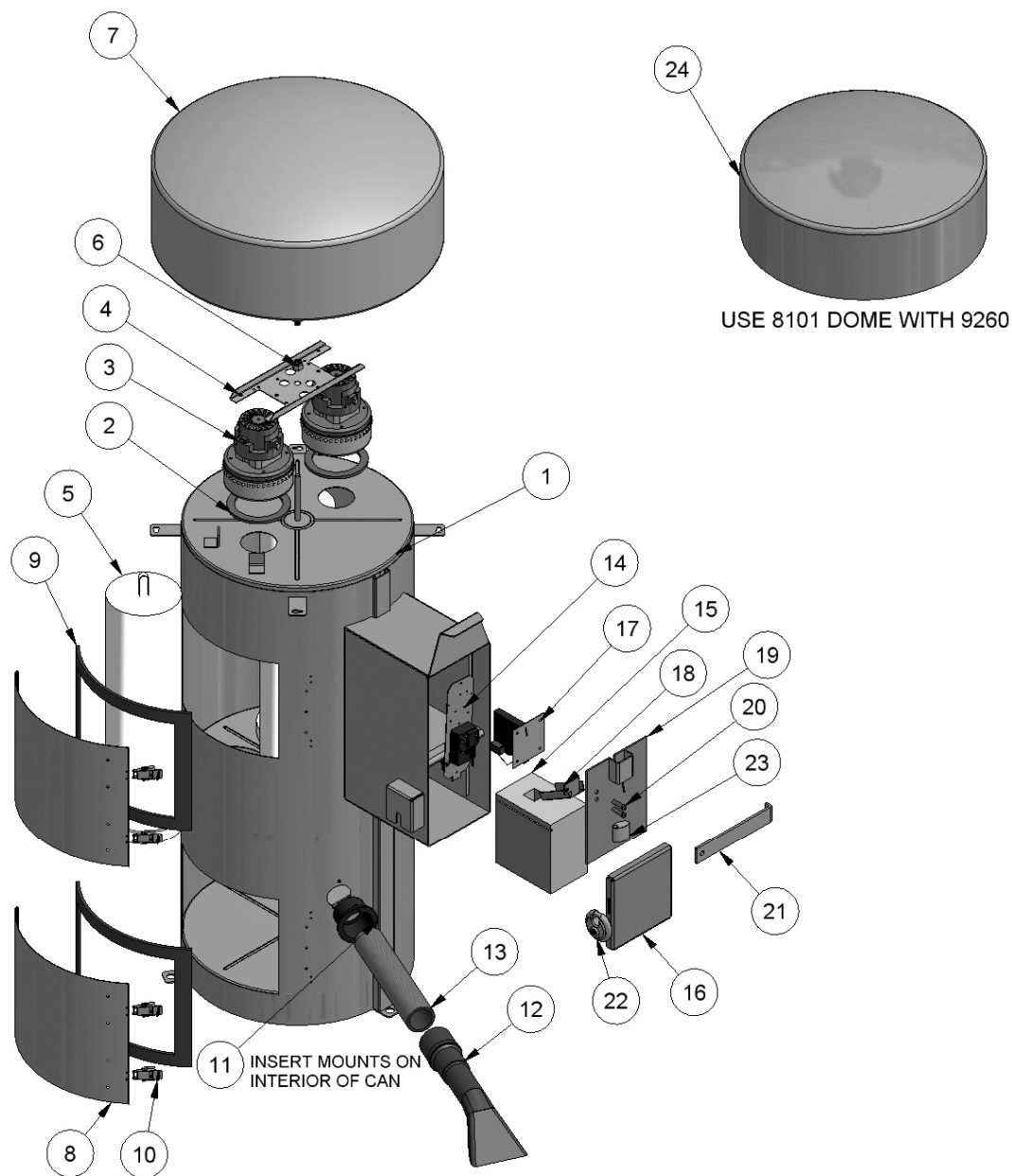
THIS DOCUMENT SHALL NOT BE REPRODUCED NOR SHALL THE INFORMATION THEREIN BE USED BY OR DISCLOSED TO OTHERS EXCEPT AS AUTHORIZED BY J.E. ADAMS INDUSTRIES



PART NO.

9250LD

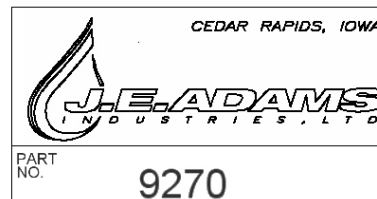
EXPLODED VIEW: 9270 STANDARD CONFIGURATION  
- FOR 9260 REPLACE ITEM 12 WITH ITEM 23



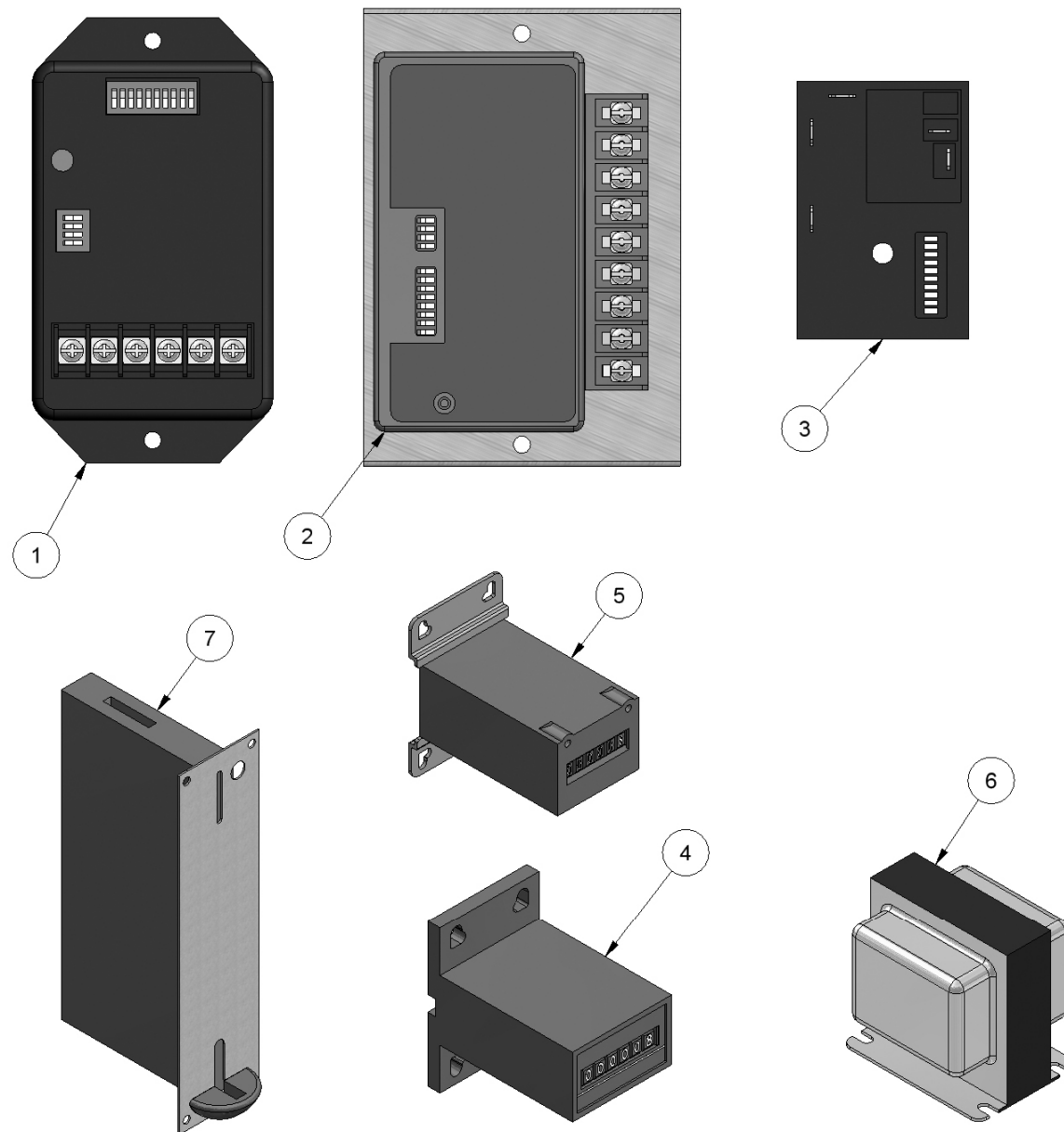
USE 8101 DOME WITH 9260

BILL OF MATERIALS			
ITEM	PART NUMBER	DESCRIPTION	QTY
1	9271W	VAC CANISTER W/C	1
2	8057	MOTOR GASKET	2
3	8055	MOTOR, AMETEK 115V	2
4	8051G	BRACKET, MOTOR MOUNT	1
5	8076	FILTER BAG	4
6	5603D11	1/2 Std NC Nylock Nut	1
7	8305	24" STAINLESS STEEL DOME	1
8	8615-5W	CLEANOUT DOOR WELDMENT	2
9	8159	DOOR GASKET	2
10	8153-1	LATCH, CLEANOUT DOOR	4
11	8615-7	INLET TUBE	1
12	2058	CLAW/CUFF ASSEMBLY, 2"	1
13	2036	HOSE, 2" X 15' BLACK VACUUM	1
14	8221SS4	TIMER ASSY, 110 SSAC	1
15	8773	JB12 BOX W/ COVER AND LOCKS	1
16	8949W	FACEPLATE WELDMENT, JB-7	1
17	8124B001	COIN ACCEPTOR, IMONEX	1
18	8959	COIN RAMP	1
19	8948W	FACEPLATE WELDMENT, JB-7	1
20	5913D1	RED NEON LIGHT	2
21	8206	LOCK BAR, COIN BOX COVER	1
22	6024	ABUS DISKUS 26/70 LOCK	1
23	8638	PIN LOCK	1
24	8101	20" STAINLESS STEEL DOME	1

THIS DOCUMENT SHALL NOT BE REPRODUCED NOR SHALL THE INFORMATION THEREIN BE  
USED BY OR DISCLOSED TO OTHERS EXCEPT AS AUTHORIZED BY J.E. ADAMS INDUSTRIES

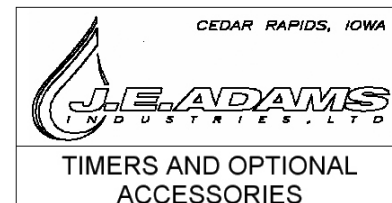


# TIMERS AND OPTIONAL ACCESSORIES - SOME ITEMS NOT SHOWN

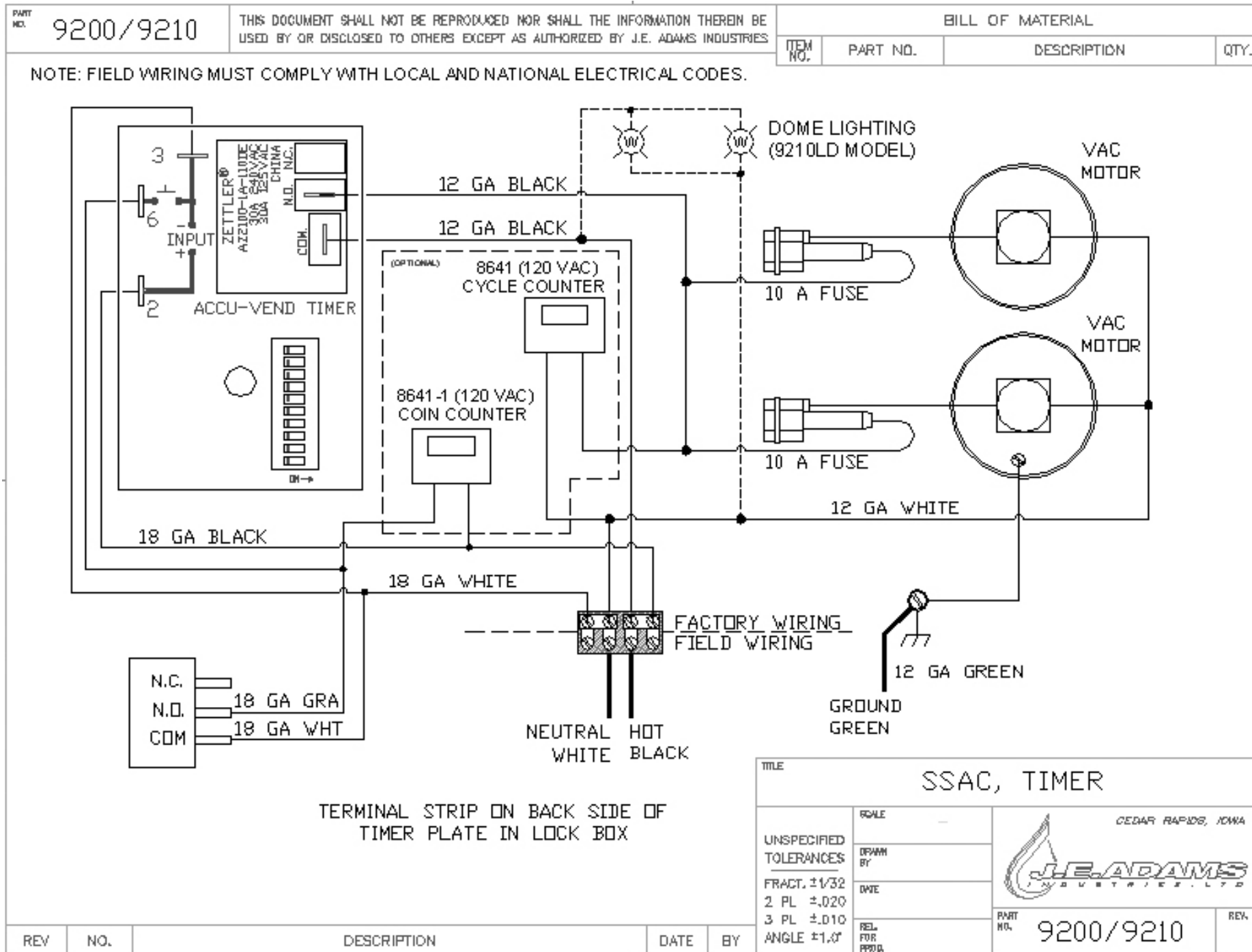


BILL OF MATERIALS		
ITEM	PART NUMBER	DESCRIPTION
1	8712ID	INFITEC TIMER
2	8712X	IDX AT411 TIMER
3	8712SS4	SSAC ACCUMULATING TIMER
3	8712SS5	SSAC NON-ACCUMULATING TIMER
4	8641	NON-RESETTABLE CYCLE COUNTER
5	8641-1	NON-RESETTABLE COIN/CYCLE COUNTER
6	8744	110-24V TRANSFORMER
7	8120	COIN ACCEPTOR - GINSAN 41 SENSOTRON
7	8120-2	COIN ACCEPTOR - GINSAN MULTITRON
7	8131-5	COIN ACCEPTOR - IDX X-10
7	8131-11	COIN ACCEPTOR - IDX MA-800
7	8140-2	COIN ACCEPTOR - SLUGBUSTER P5511
7	8140-3	COIN ACCEPTOR - SLUGBUSTER P-35
7	8149	COIN ACCEPTOR - IMONEX
8	8599	CLEAN-OUT BAG
9	8080	RUBBER CLEAN-OUT CONTAINER
10	8055BR	AMETEK MOTOR BRUSH
11	2091	HOSE CUFF
12	2056	HOSE CLAW
13	8306	24" PLASTIC DOME - WHITE
13	8306B	24" PLASTIC DOME - BLUE
13	8306R	24" PLASTIC DOME - RED
13	8306Y	24" PLASTIC DOME - YELLOW
13	8306DG	24" PLASTIC DOME - DARK GREEN
13	8306LG	24" PLASTIC DOME - LIGHT GREEN

THIS DOCUMENT SHALL NOT BE REPRODUCED NOR SHALL THE INFORMATION THEREIN BE USED BY OR DISCLOSED TO OTHERS EXCEPT AS AUTHORIZED BY J.E. ADAMS INDUSTRIES




**NOTE: 9200/9210 SCHEMATIC ALSO USED FOR MODELS 9220, 9230, 9230LD, 9240, 9250 AND 9250LD**

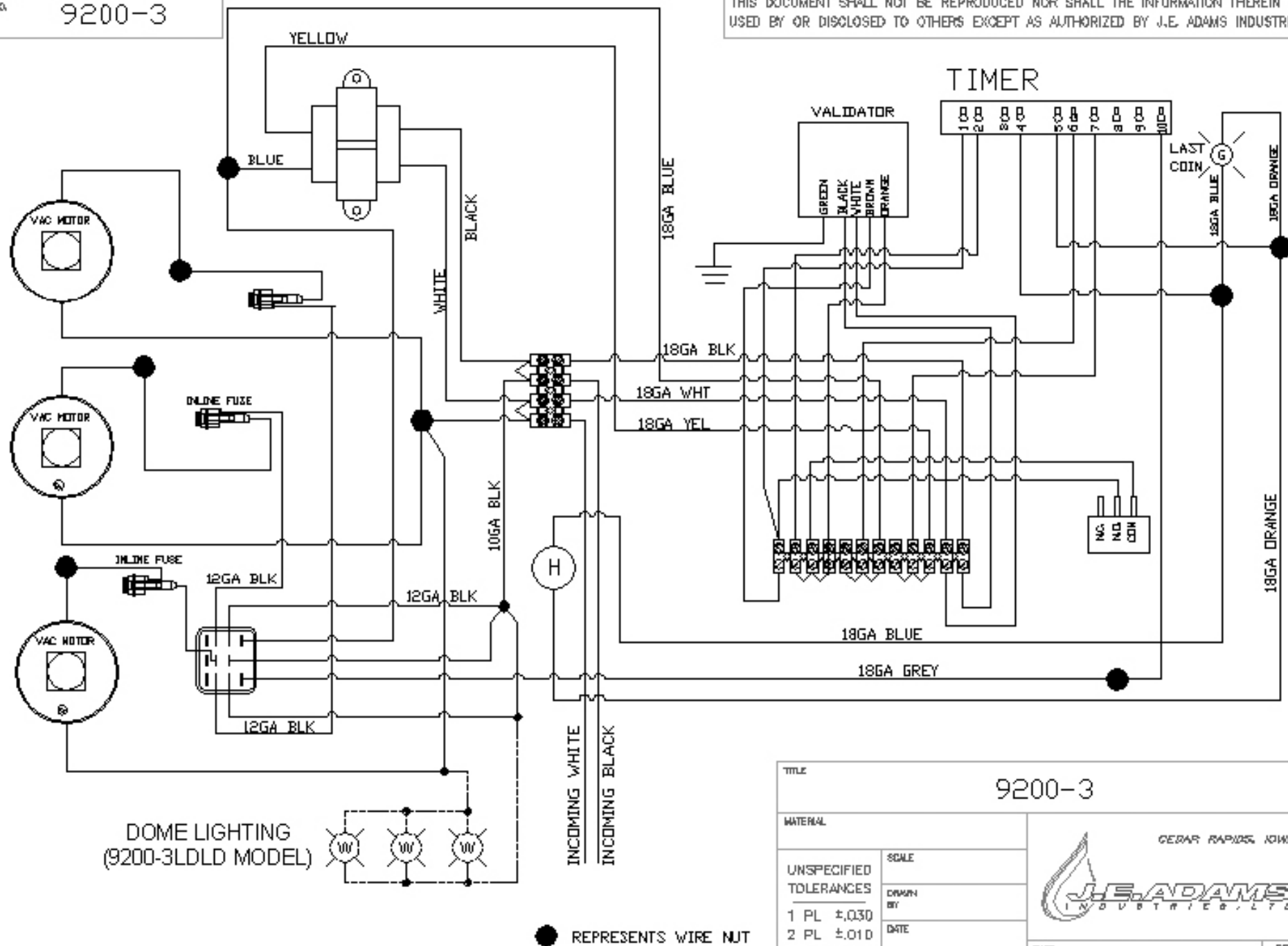


VALIDATOR



TITLE		9200-1	
MATERIAL		 CEDAR RAPIDS, IOWA	
UNSPECIFIED TOLERANCES	SCALE	PART NO. 9200-1	REV.
	DRAWN BY		
	DATE		
	1 PL ±.030 2 PL ±.010 3 PL ±.003 ANGLE ±1.0°		
PREP FOR PROD			





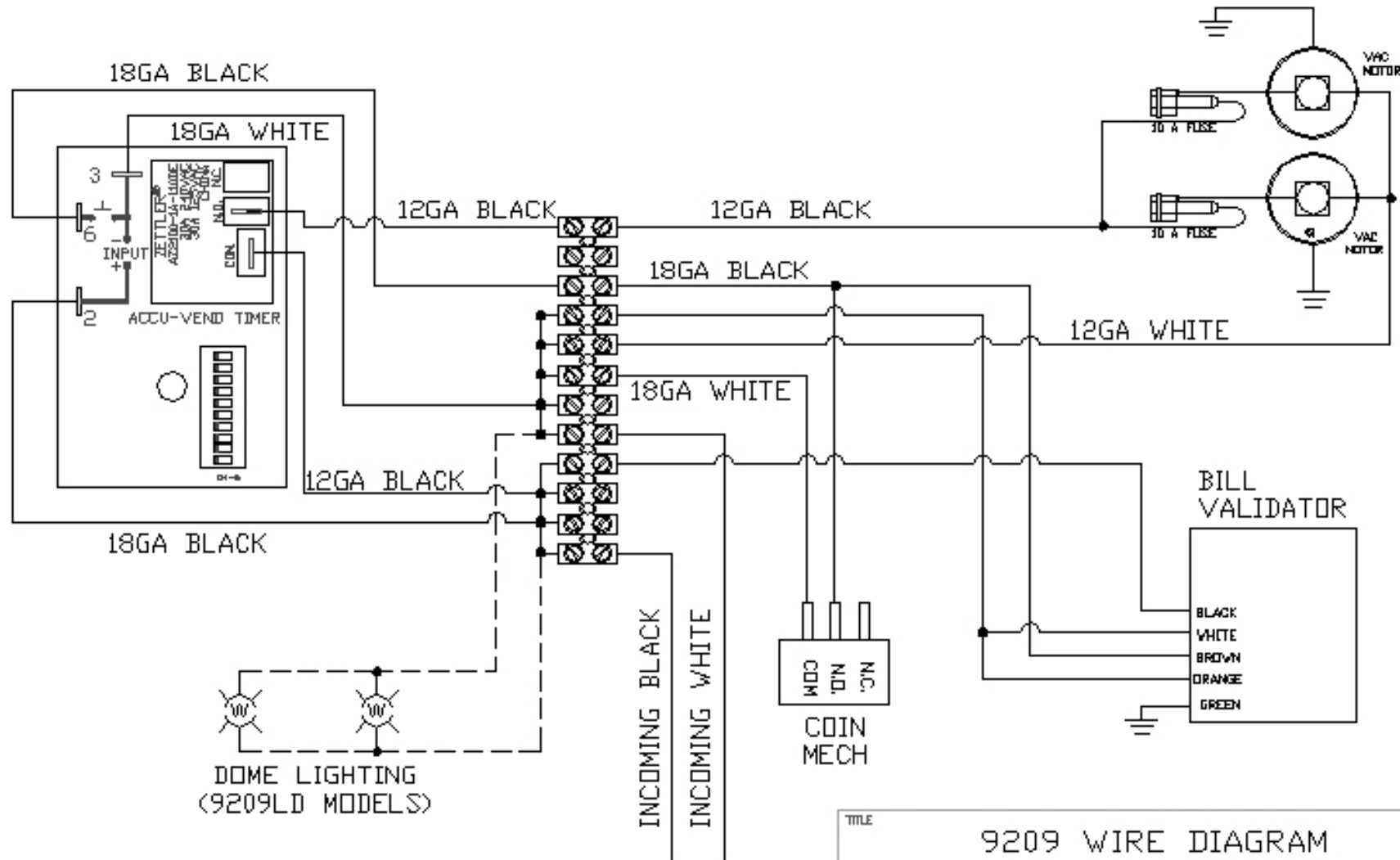
● REPRESENTS WIRE NUT


REV	NO.	DESCRIPTION	DATE	BY
-----	-----	-------------	------	----

TITLE		9200-3	
MATERIAL		CEDAR RAPIDS, IOWA	
UNSPECIFIED TOLERANCES		SCALE	
1 PL ±.030		DRAWN BY	
2 PL ±.010		DATE	
3 PL ±.003		REL FOR PWOL	
ANGLE ±1.0°		PART NO. 9200-3WIRE	
		REV.	

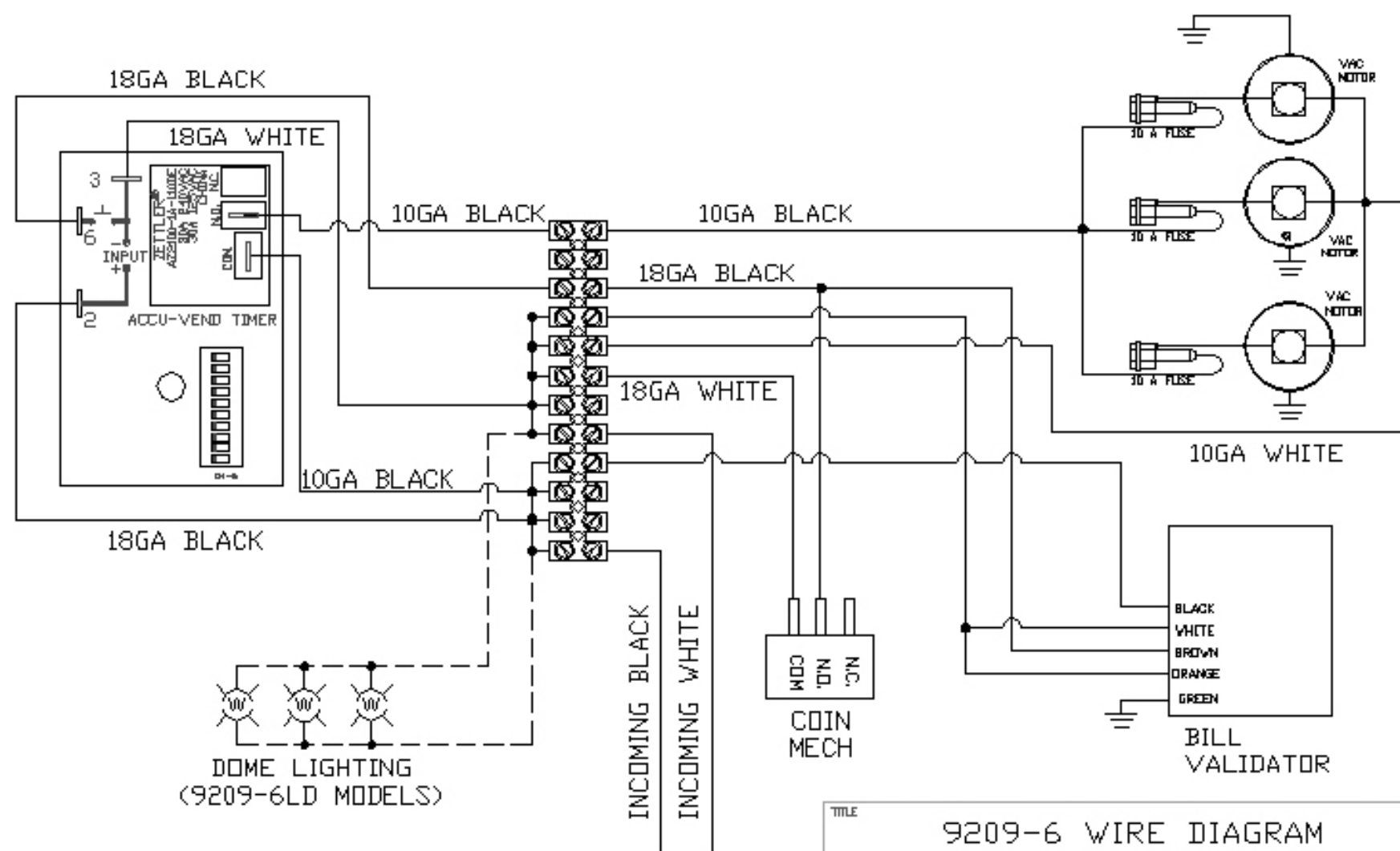
ITEM NO.	PART NO.	DESCRIPTION	QTY.
----------	----------	-------------	------

NOTE: FIELD WIRING MUST COMPLY WITH LOCAL AND NATIONAL ELECTRICAL CODES.



TITLE				
9209 WIRE DIAGRAM				
UNSPECIFIED TOLERANCES  FRACT. $\pm 1/32$ 2 PL $\pm .020$ 3 PL $\pm .010$ ANGLE $\pm 1.0^\circ$	SCALE	 CEDAR RAPIDS, IOWA	PART NO.	
	DRAWN BY			9209
	DATE			
	REL. FOR PROD.			REV.

NOTE: FIELD WIRING MUST COMPLY WITH LOCAL AND NATIONAL ELECTRICAL CODES.



TITLE

9209-6 WIRE DIAGRAM

UNSPECIFIED  
TOLERANCESFRACT.  $\pm 1/32$ 2 PL  $\pm .020$ 3 PL  $\pm .010$ ANGLE  $\pm 1.0^\circ$ 

SCALE

DRAWN  
BY

DATE

REL  
FOR  
PROD.

CEDAR RAPIDS, IOWA

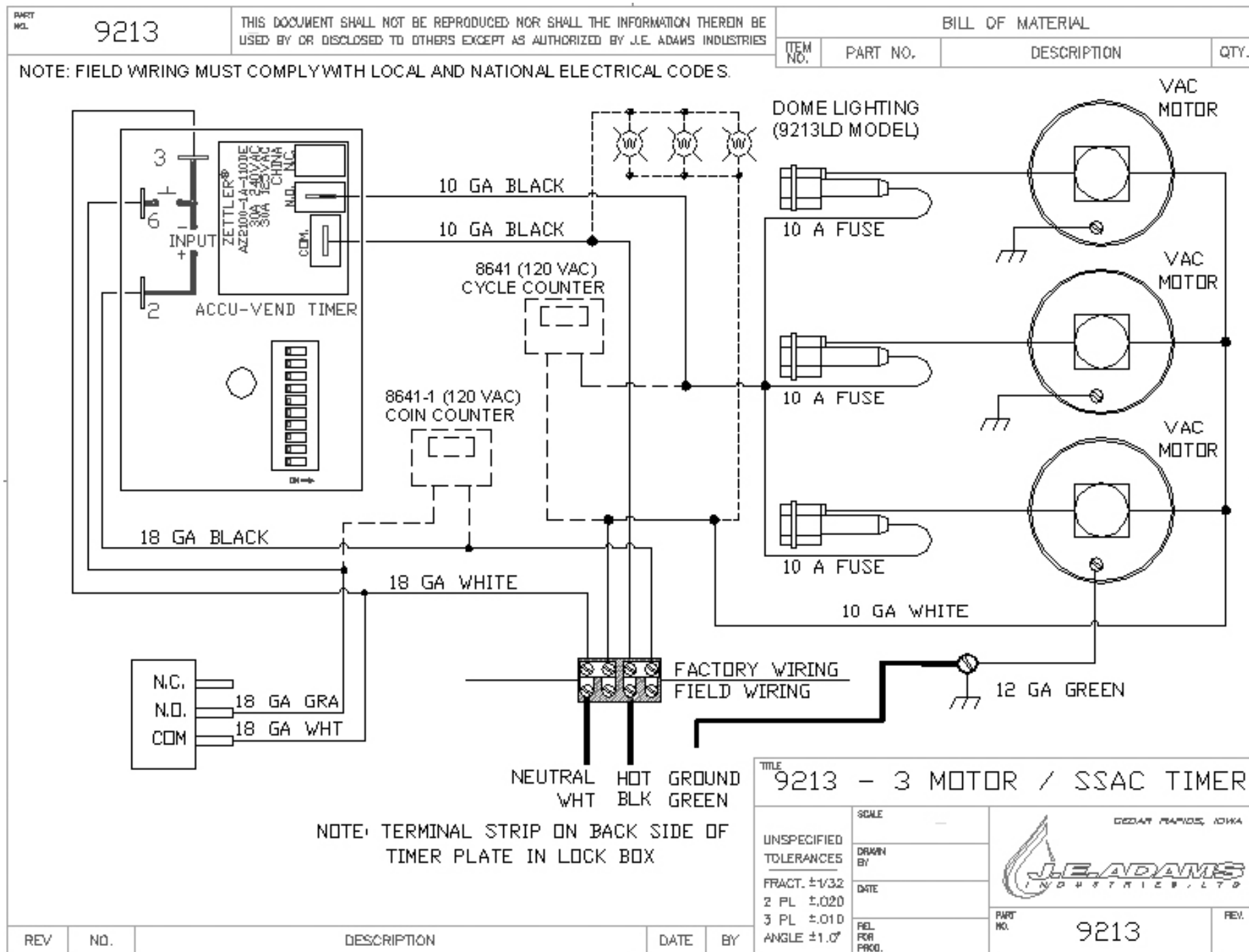
PART  
NO.

9209-6

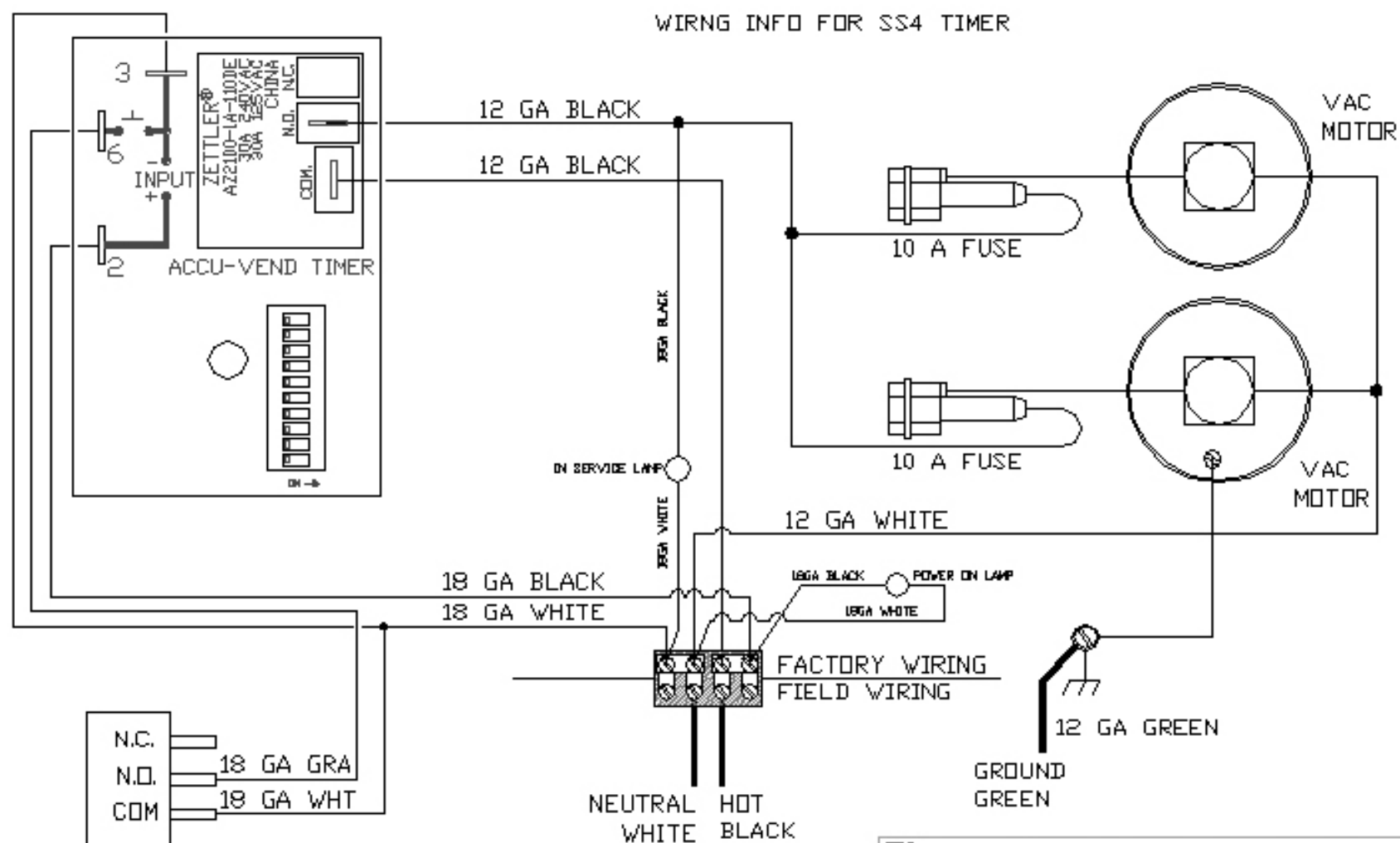
REV.

REV	NO.	DESCRIPTION	DATE	BY

**NOTE: 9213 SCHEMATIC ALSO USED FOR MODELS 9230-3 AND 9230LD-3**




ITEM NO.	PART NO.	DESCRIPTION	QTY.
----------	----------	-------------	------



TERMINAL STRIP ON BACK SIDE OF  
TIMER PLATE IN LOCK BOX

FIELD WIRING MUST COMPLY WITH  
WITH LOCAL AND NATIONAL ELECTRICAL CODES

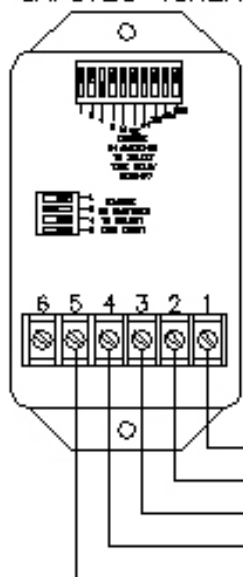
TITLE SSAC, TIMER- P/LAMP IN/LAMP		CEDAR RAPIDS, IOWA	
UNSPECIFIED TOLERANCES  FRACT. $\pm 1/32$ 2 PL $\pm .020$ 3 PL $\pm .010$ ANGLE $\pm 1.0^\circ$	SCALE —		REV.
	DRAWN BY		
	DATE		
	PRI. FOR PROD.	PART NO.	9260/9270

ITEM NO.	PART NO.	DESCRIPTION	QTY.
-------------	----------	-------------	------

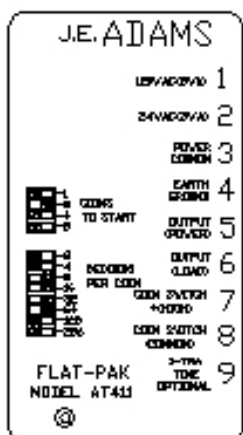
## 2 MOTOR VAC - ALTERNATE CONFIGURATIONS

CONTACT MANUFACTURER FOR FULL SCHEMATICS FOR CUSTOM CONFIGURATIONS

INFITEC TIMER



110V HOT  
MOTOR FUSES  
110V NEUTRAL  
TO COIN ACCEPTOR  
FROM COIN ACCEPTOR



IDX TIMER

110V NEUTRAL  
GROUND TO CHASSIS  
110V HOT  
MOTOR FUSES  
FROM COIN ACCEPTOR  
TO COIN ACCEPTOR

24V HOT — YELLOW

24V NEUTRAL — BLACK

FROM TIMER — RED/GRN

TO TIMER — RED/GRN

COIN  
ACCEPTOR

24V HOT — YELLOW

24V NEUTRAL — BLACK

TO TIMER — BLUE

NOT USED — PURPLE

## TITLE

2 MOTOR VAC - ALTERNATE CONFIGURATIONS

UNSPECIFIED  
TOLERANCES

FRACT.  $\pm 1/32$   
2 PL  $\pm .020$   
3 PL  $\pm .010$   
ANGLE  $\pm 1.0^\circ$

SCALE

DRAWN  
BY

DATE

REL.  
FOR  
PROD.

CEDAR RAPIDS, IOWA

PART  
NO.

REV.

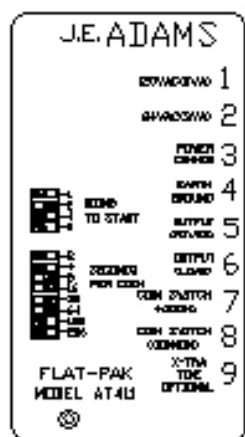
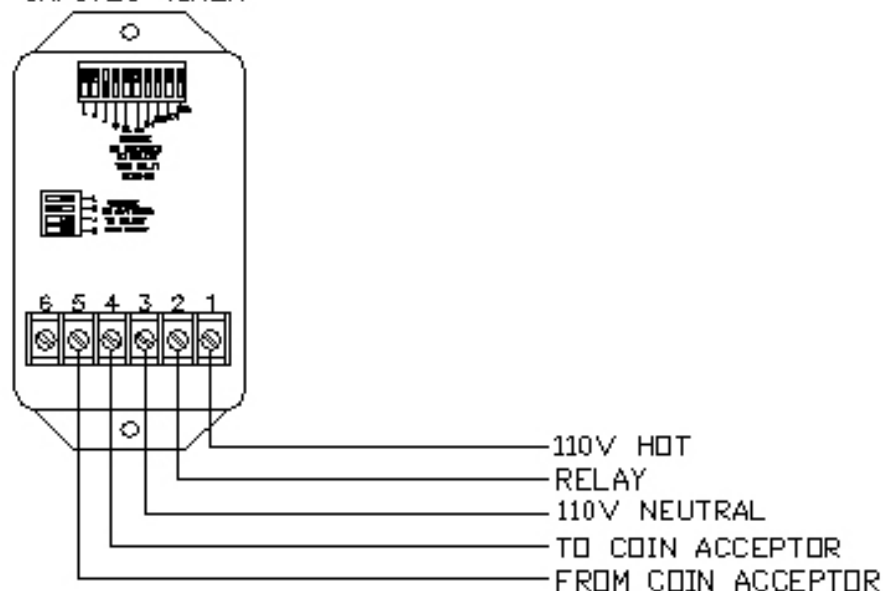
REV	NO.	DESCRIPTION	DATE	BY
-----	-----	-------------	------	----

ITEM NO.	PART NO.	DESCRIPTION	QTY.
-------------	----------	-------------	------

### 3 MOTOR VAC - ALTERNATE CONFIGURATIONS

CONTACT MANUFACTURER FOR FULL SCHEMATICS FOR CUSTOM CONFIGURATIONS

INFITEC TIMER



IDX TIMER

24V HOT — YELLOW

24V NEUTRAL — BLACK

FROM TIMER — RED/GRN

TO TIMER — RED/GRN

COIN  
ACCEPTOR


24V HOT — YELLOW

24V NEUTRAL — BLACK

TO TIMER — BLUE

NOT USED — PURPLE

### 3 MOTOR VAC - ALTERNATE CONFIGURATIONS

UNSPECIFIED TOLERANCES	SCALE		
FRACT. $\pm 1/32$	DRAWN BY		
2 PL $\pm .020$	DATE		
3 PL $\pm .010$	REL FOR PROB.		
ANGLE $\pm 1.0^\circ$	PART NO.	REV.	

REV	NO.	DESCRIPTION	DATE	BY
-----	-----	-------------	------	----

# **TROUBLESHOOTING**

## **! IMPORTANT!**

**TROUBLESHOOTING SHOULD BE DONE BY A QUALIFIED ELECTRICIAN OR TECHNICIAN WITH POWER DISCONNECTED WHENEVER POSSIBLE. PROCEDURES MARKED !CAUTION! REQUIRE THAT THE POWER BE ON AND MAY INVOLVE DANGEROUS VOLTAGES.**

Problem	Possible Cause	Solution
Unit will not start	No power to machine	Check circuit breaker for machine. Reset if needed.
	<b>!CAUTION!</b> Inadequate power to machine	Verify proper service hookups. Two motor 120V vacs should have a minimum of 20 Amp service and 12GA wire (50 ft run or less). Two motor 220V vacs should have a minimum of 10 Amp service and 14GA wire (50 ft run or less). Three motor 120V vacs should have a minimum of 30AMP service and 10GA wire (50 ft run or less). Three motor 220V vacs should have a minimum of 15AMP service and 14GA wire (50 ft run or less). Verify proper voltage levels for unit.
	Blown fuse	Check for short circuits and wire damage, repairing if necessary. Replace fuses.
	Loose/Missing/Damaged wire	Verify integrity of wires. If possible, trace continuity between key components (motors, timer, coin mech, relay).
	<b>!CAUTION!</b> Component failure	Check key components to isolate failure:
		<b>Timer:</b> Verify proper input voltage. Activate timer. If no output voltage is present when timer should be active, replace timer.
		<b>Relay:</b> Check voltage across the relay coil. If proper voltage is present and relay doesn't engage, or if relay doesn't disengage when voltage is removed, replace relay.
		<b>Coin mech:</b> Remove the wires leading to the timer from the coin mech and tap them together one time for each coin necessary to start the timer. If machine starts, replace the coin mech.
Blown fuses	Improper fuse rating	Use 10 Amp fuses for 120V motors and 5 Amp fuses for 220V motors.
	<b>!CAUTION!</b> Bad motor	120V motors should draw 7-8.5 Amps (3.5-4 Amps for 220V units) while running. Replace motor or brushes if current draw exceeds 8.5 Amps (4 Amps for 220V)
	Shorted/Damaged wiring	Check wiring for visible damage and replace if necessary with wiring of equal ratings.
Timer giving inaccurate time	Improper timer setup	Reset the timer according to instructions.
Unit runs continuously and will not shut off	Loose wiring	Inspect wiring from coin mech to timer to verify proper connection.
	<b>!CAUTION!</b> Damaged relay	Check voltage at relay coil. If no voltage is present and machine is running, replace relay.
	<b>!CAUTION!</b> Damaged timer/Coin mech	Isolate timer from coin mech. If timer continues to run after the maximum possible timer setting, replace timer. If unit times out and turns off, coin mech may need to be replaced.