



93040 & 94040 Fragrance Vac

Installation/Operations Manual



**COLEMAN
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INSTALLATION PROCESS

- 1) Uncrate the vacuum and inspect for damage. Report all damage to freight lines.
- 2) Remove stainless steel shroud from under meter to expose 110V cord. Unbolt vacuum from wooden crate (save rubber washers on 93040 model).
- 3) Set vacuum cleaner on cardboard, and make a template or pattern by cutting out cardboard in shape of vacuum cleaner.
- 4) Take template and set on vacuum base, and mark holes for bolts.
- 5) Drill holes in concrete using a 1/2" drill bit. Blow out all concrete dust from holes.
- 6) Set vacuum cleaner over holes, and hammer in 1/2" x 5 1/2" Anchor Bolts. Make sure you install rubber washer between metal washer and vacuum canister to provide air-tight seal.
- 7) Plug vacuum cord under shroud into 110V. Install stainless steel shroud back in place. Open up Vacuum/Fragrance cabinet with keys provided with Owner's Manual.
- 8) Remove glass containers from visual display, and fill about 3/4 full with visual display fluid found in quart bottles. Do not overfill, or fluid will overflow when you put in air tube and cap. Put one color into each glass container, and put back in window.
- 9) Place one gallon fragrance bottles in the bottom of the cabinet. Punch a small hole in the cap of the fragrance bottle, and feed the small plastic tubing into the fragrance bottle. On the control panel are three brass solenoids, with the top solenoid tied into the left-hand fragrance on the door. The second solenoid from the top is the center fragrance on the door, and the third solenoid is the right-hand fragrance on the door. Install the decals on the door to match the proper color of the display fluid, and to match the fragrance you placed inside the cabinet.
- 10) Now, turn on the power to the vacuum cleaners, and install a sample coin in the Sensortron. Refer to Timer Instruction Sheet to properly set price and time on timer. Unit is preset to price on decals and normal time.
- 11) Drop coins into coin acceptor, and turn fragrance machine on. Run each fragrance about 1 - 2 minutes to completely purge all air from lines. Make sure that when you select a fragrance, that fragrance is the one being dispensed.
- 12) Drop coins into coin acceptor and select vacuum. Check vacuum for proper suction and install vacuum hose.

THEORY OF OPERATION

FRAGRANCE

- 1) Coins are deposited into coin acceptor. Coin acceptor sends out a 24V pulse to the timer.
- 2) When the proper amount of coins is deposited, the timer then waits for a signal from the push button switch.
- 3) When a fragrance is selected, the timer turns on the proper fragrance solenoid and air compressor.
- 4) The air compressor starts pumping air to the stainless steel gun. In the gun is an atomizer that creates suction, causing the fragrance to be pulled into the gun and blown out into a mist.
- 5) The air compressor will continue to run until the time runs out on the timer. You can change fragrance selection at anytime during the cycle.

VACUUM

- 1) Coins are deposited into coin acceptor. Coin acceptor sends out a 24V pulse to the timer.
- 2) When the proper amount of coins is deposited, the timer then waits for a signal from the push button switch.
- 3) When the vacuum button is pressed, the timer turns on the 24V Mercury Relay.
- 4) The mercury relay sends power to the vacuum motors.
- 5) The vacuum motors start to run, which draws air through the filter bags, and through the vacuum hose.



MAINTENANCE

<i>Weekly</i>
1) Clean out plastic dirt canister.
2) Clean vacuum bags with brush.
3) Clean stainless steel door, and check gasket for leaks.
4) Wash vacuum hose inside and out.
5) Wipe down outside of vacuum canister with damp cloth.
6) Check fragrance levels in one gallon container and refill as necessary
7) Check levels on visual display tubes.
8) Test fragrance machine operation.

<i>Every Six Months</i>
1) Remove vacuum dome and wash thoroughly.
2) Clean fluorescent lamps with damp towel.
3) Check brushes in vacuum motor for wear, and replace as needed.
4) Wash filter bags.
5) Wash out bottom dirt canister and dirt funnel.
6) Check hose for fraying and replace as necessary.



93040 & 94040 PARTS LIST

ITEM	PART #	DESCRIPTION
1	93100	SS Vacuum Body (1)
	94100	SS Vacuum Body (1)
2	93111	Poly Vacuum Dome Oval
	92111	Poly Vacuum Dome Round
3	37400	Vacuum Body Decal-White
	37410	Vacuum Body Decal-Blue
4	93115	Dome Anchor Bolt (6)
5	92116	Dirt Door W/ Hinge For Rnd Vac-1
	93120	Vacuum Dirt Door W/ Hinge
6	93125	Dirt Door Gasket (1)
	92120	Dirt Door Gasket (1)
7	93130	Screw-Dirt Door Hinge (1)
	92132	Screw Dirt Door Hinge
8	93135	Dirt Door Latch
	92128	SS Dirt Door Latch (2)
9	93140	Dirt Door Latch/Strike Screw
10	93145	Vacuum Door Strike
	92136	Vacuum Dirt Door Strike
13	93155	Dirt Receptacle
14	93160	Dirt Diverter
19	24320	Cam Lock Assembly
22	37104	Price Decal
25	26022	Coin Return Cup (1)
27	93185	Coin Box Tray SS (1)
28	26242	Electronic Coin Acceptor (1)
29	24442	Abus Coin Box Lock (1)
30	93190	Coin Box Door (1)
31	93195	SS Shroud (1)
32	93200	Screw-Shroud (6)
33	93210	Stainless Steel Motor Plate
34	93215	Motor Plate Gasket
36	93320	Motor Bracket (4)
37	93225	Screw-Motor Brackets (8)
38	93230	Motor Plate Wingnut

93040 & 94040 PARTS LIST (cont.)

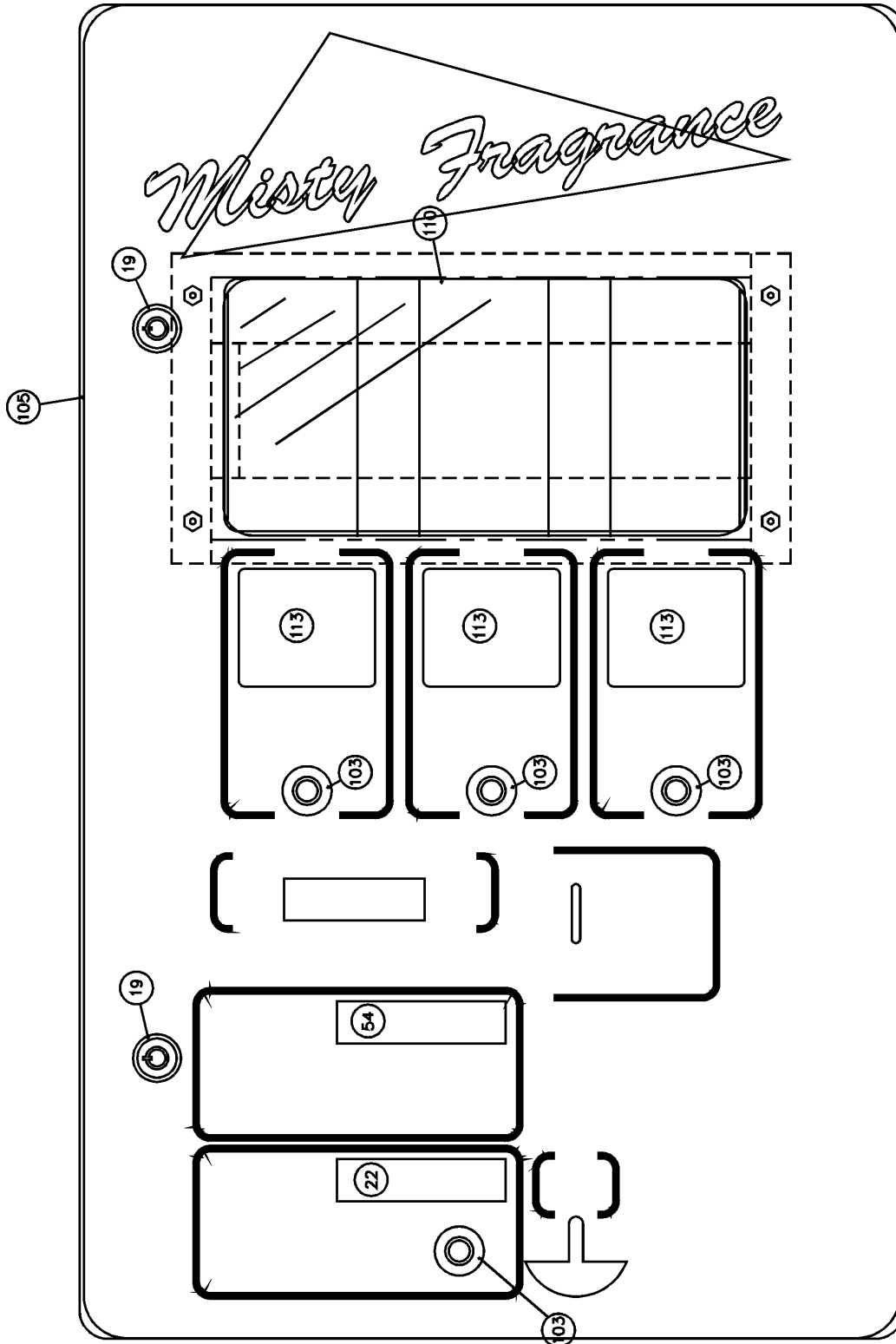
ITEM	PART #	DESCRIPTION
39	66036	Vac Motor Filter Screens (2)
40	92156	Vac Motor Gasket
41	55114	Vacuum Motor 1.6 Hp 110V(2)
42	42000	Vacuum Dome Light Fixture
43	42004	Vacuum Dome Light Fixture Bulb
44	93235	Dome Light Nut
46	93240	Rubber Grommet (2)
49	93245	Filter Bag (4)
50	93250	Sealing Washer (4)
51	93255	Wing Nut (4)
53	92176	Power Cord (1)
56	92200	2" X 15' Vacuum Hose (1)
57	92214	2" X 2" Vacuum Swivel Cuff (1)
58	92229	Black Upholstery Tool (1)
60	40050	Square D 25 Amp Circuit Breaker
62	60010	Durakool 24V Mercury Relay (1)
63	82062	24 V-120 V Transformer (1)
64	93260	Wiring Harness (1)
65	93265	Motor Power Cord (1)
66		Cabinet
67		110V Heater
68		Coin Chute
69	12002	Air Compressor
70	22052	¼" ST Elbow
73	93170	Door Gaskets
74	68120	Freeze Thermostat
75	40002	6 Pin Terminal Strip
76		SS Gun Holder Assy
77	52122	1/8" Barb x 10-32MT
79	52120	1/8" x 10-32 Adapter
80	64010	1/8" 3-Bank Solenoid Block
81	52128	1/8" MPT x 1/8" Tubing 90°
82	22094	¼" X 1/8" Bushing
84	60029	Small Relay Base

93040 & 94040 PARTS LIST (cont.)

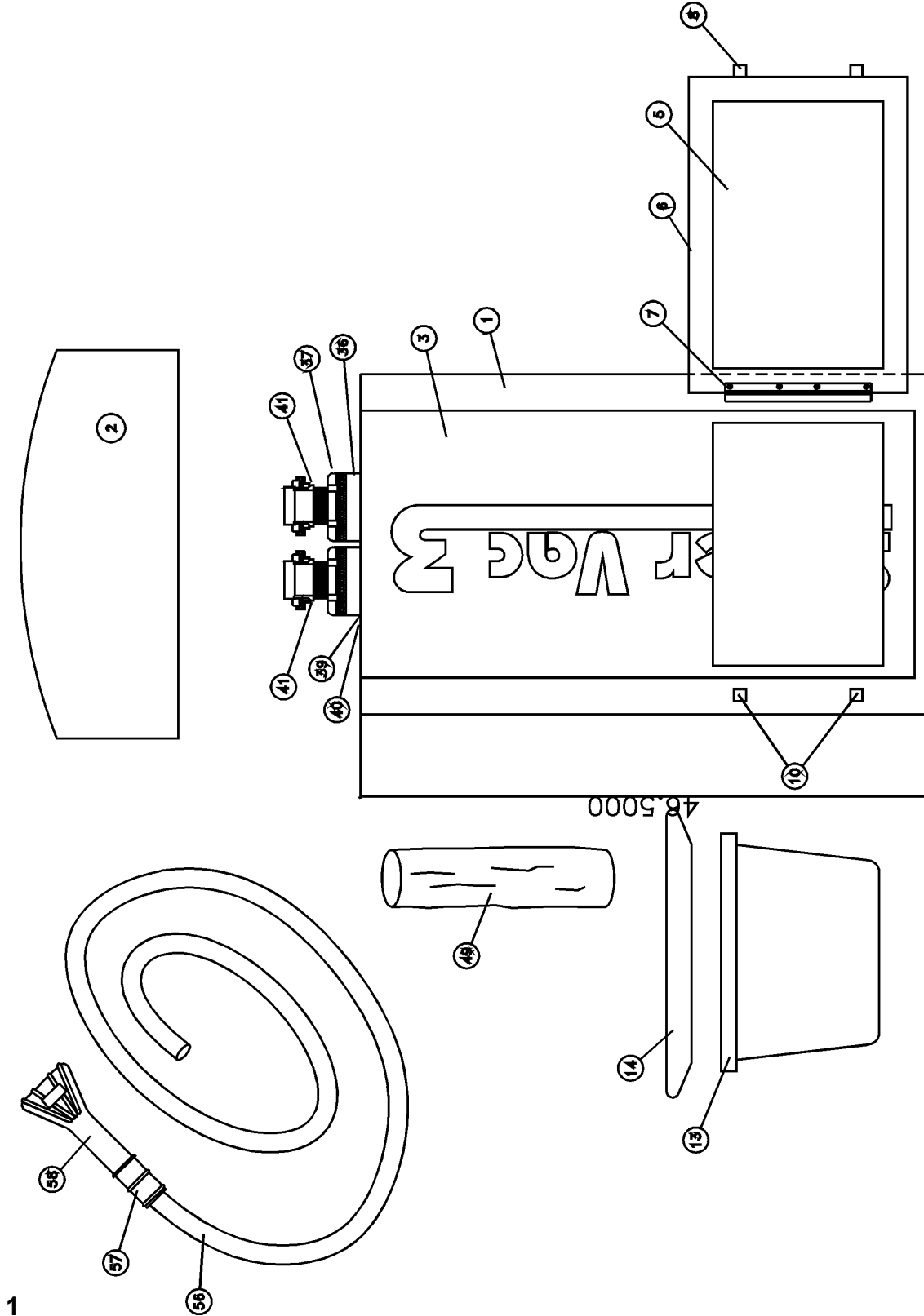
ITEM	PART #	DESCRIPTION
85	60005	Small Relay IPDT 24V
86	33420	CT2040 Count Down Timer
87	22002	3/8" MPT x 3/8" SAE Coupling
88	52169	12' x 3/8" Hose Assy
90		Hinge
91	46028	Bubbler Tube
92	40182	3" Tie Wrap
93	46030	Display Air Line
94	46038	Column Tube Cap
95	46014	Vacuum/Fragrance Door
96	46068	Visual Display Tube Holder
97	12004	Visual Display Air Compressor
98	24340	Cam Lock Cam
100	42004	Fluorescent Lamp 24" 20 Watt
101	42010	Light Fixture
103	72026	Push Button Switch
105	37450	Door Decal
106	46023	Column Display Tube
107	24352	Cam Lock Mounting Nut
108	29348	Cam Lock Lock-Washer
109	24350	Cam Lock Nut
110	46073	Lexan Face Plate
111	46024	Visual Tube Mounting Gasket
112		Fluorescent Fixture Mnt Bracket
113	37460	Fragrance Selection Decal
114	37462	Vacuum Decal
115	52169	12' x 3/8" Hose
117	52100	12' x 1/8" (x4) Tubes
118	46054	Fragrance Atomizer
119	46046	SS Fragrance Gun

**DENOTES PARTS THAT ARE NOT ON THE PARTS BREAKDOWN

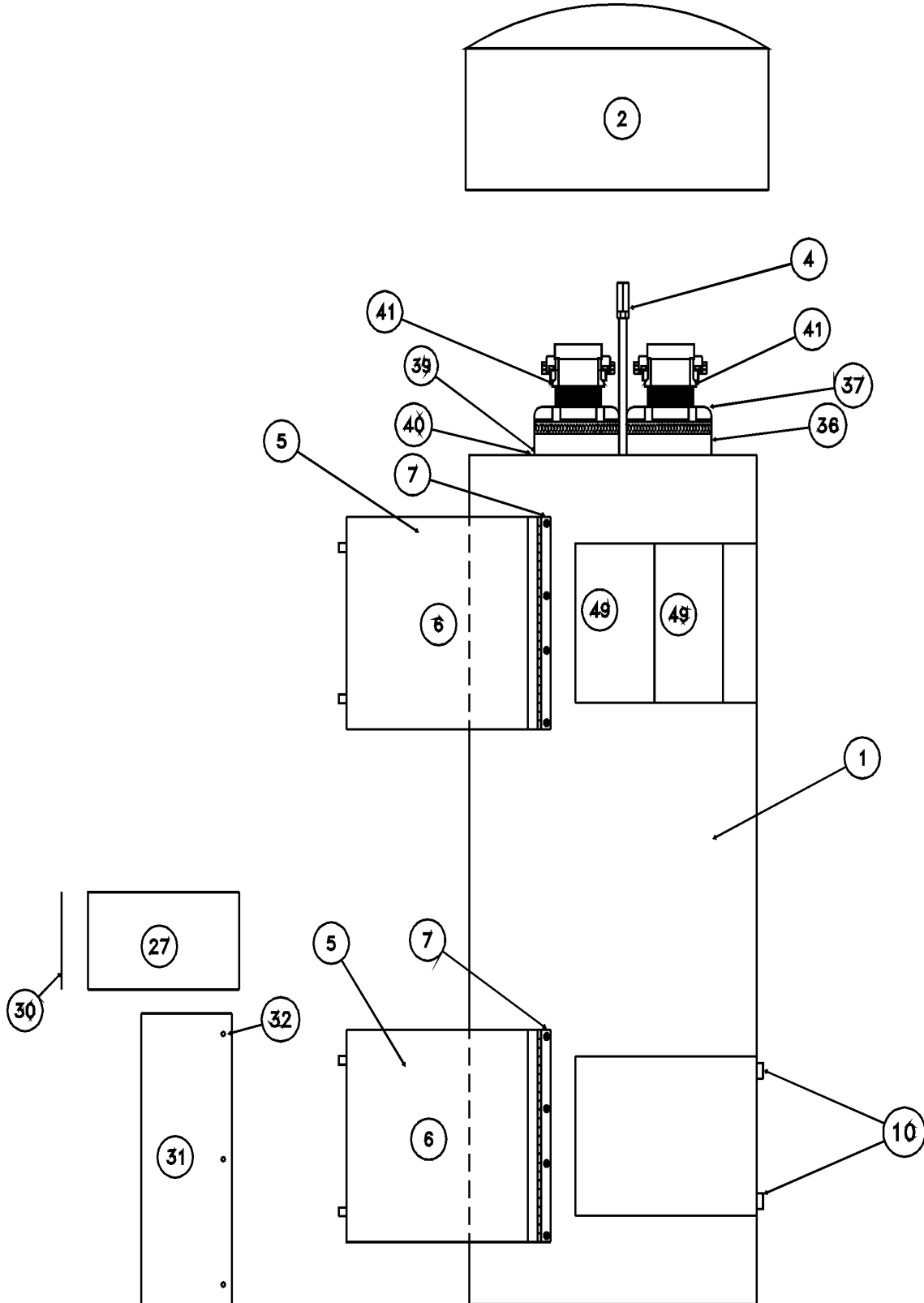
FRONT DOOR OF FRAGRANCE UNIT 1



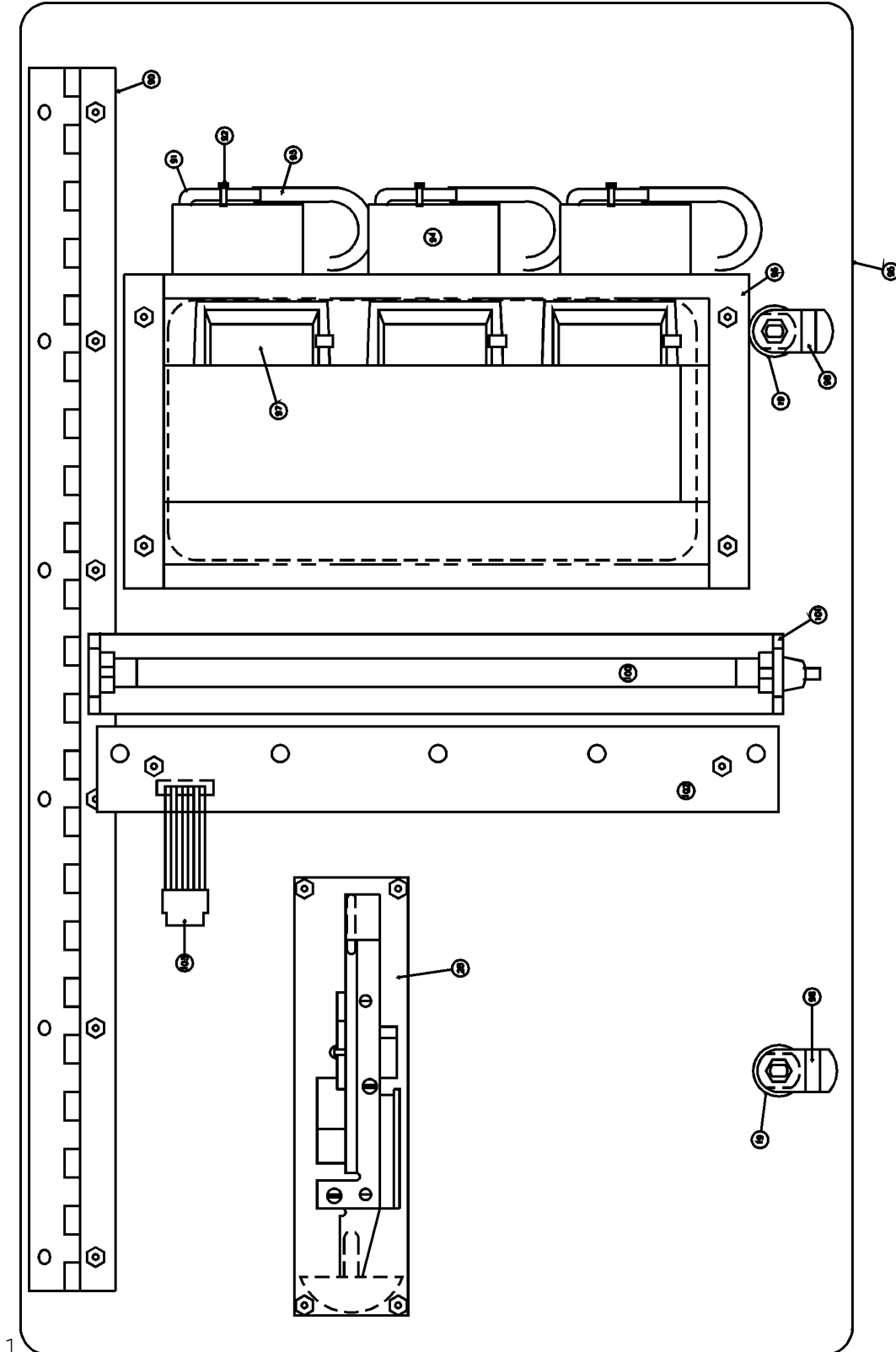
FRAGRANCE VACUUM-PARTS BREAKDOWN



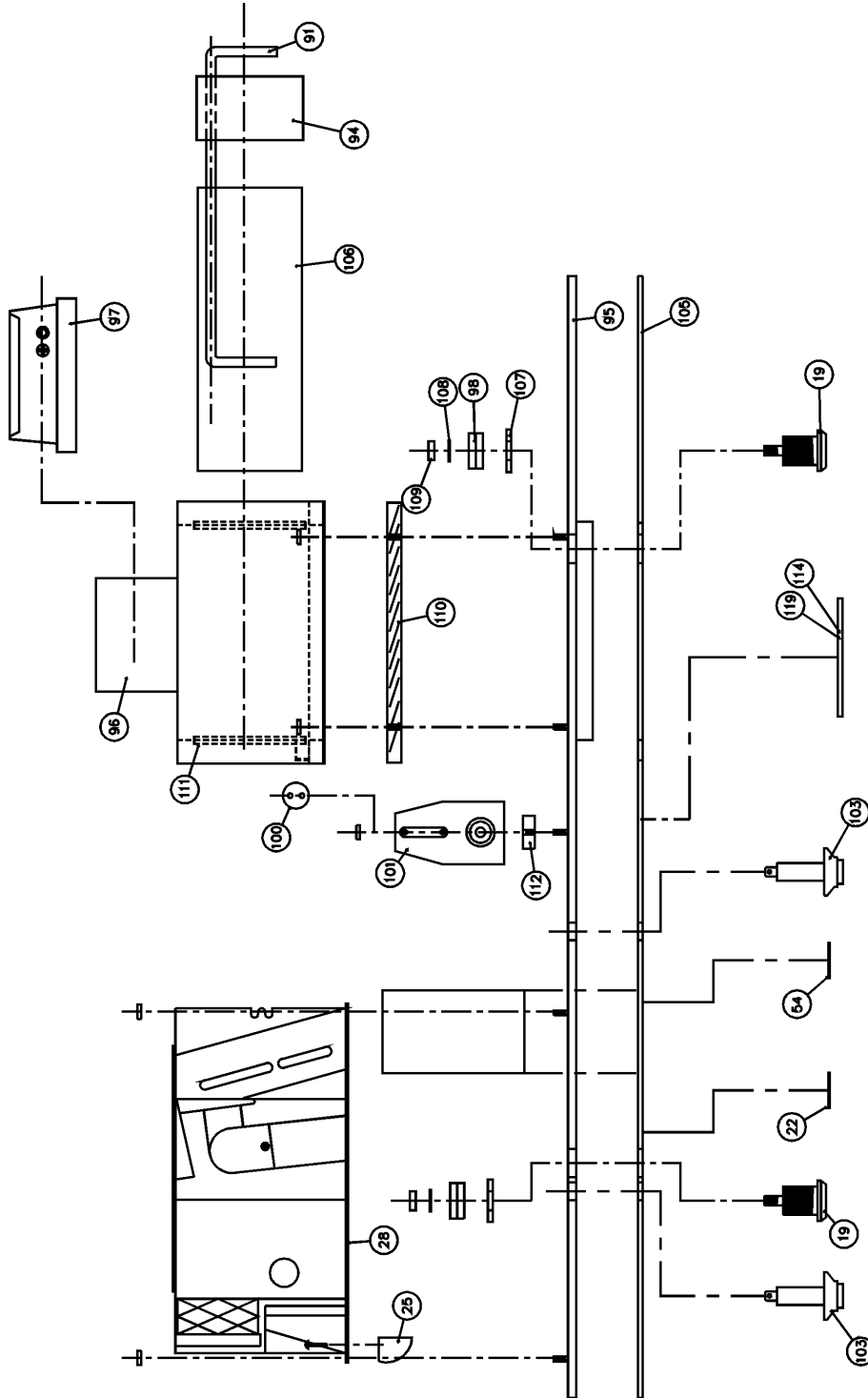
FRAGRANCE VACUUM-PARTS BREAKDOWN 2



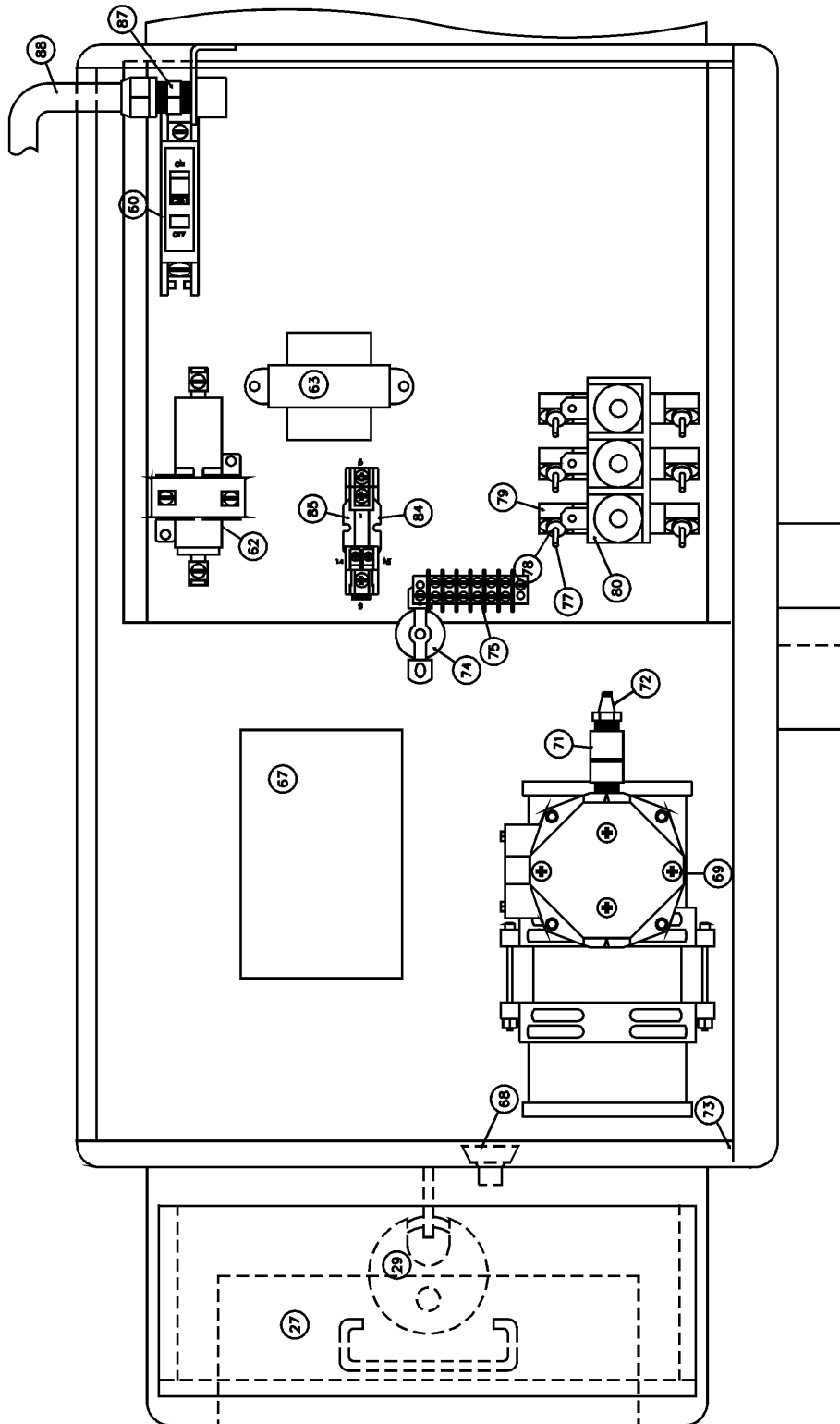
REAR VIEW OF FRONT DOOR



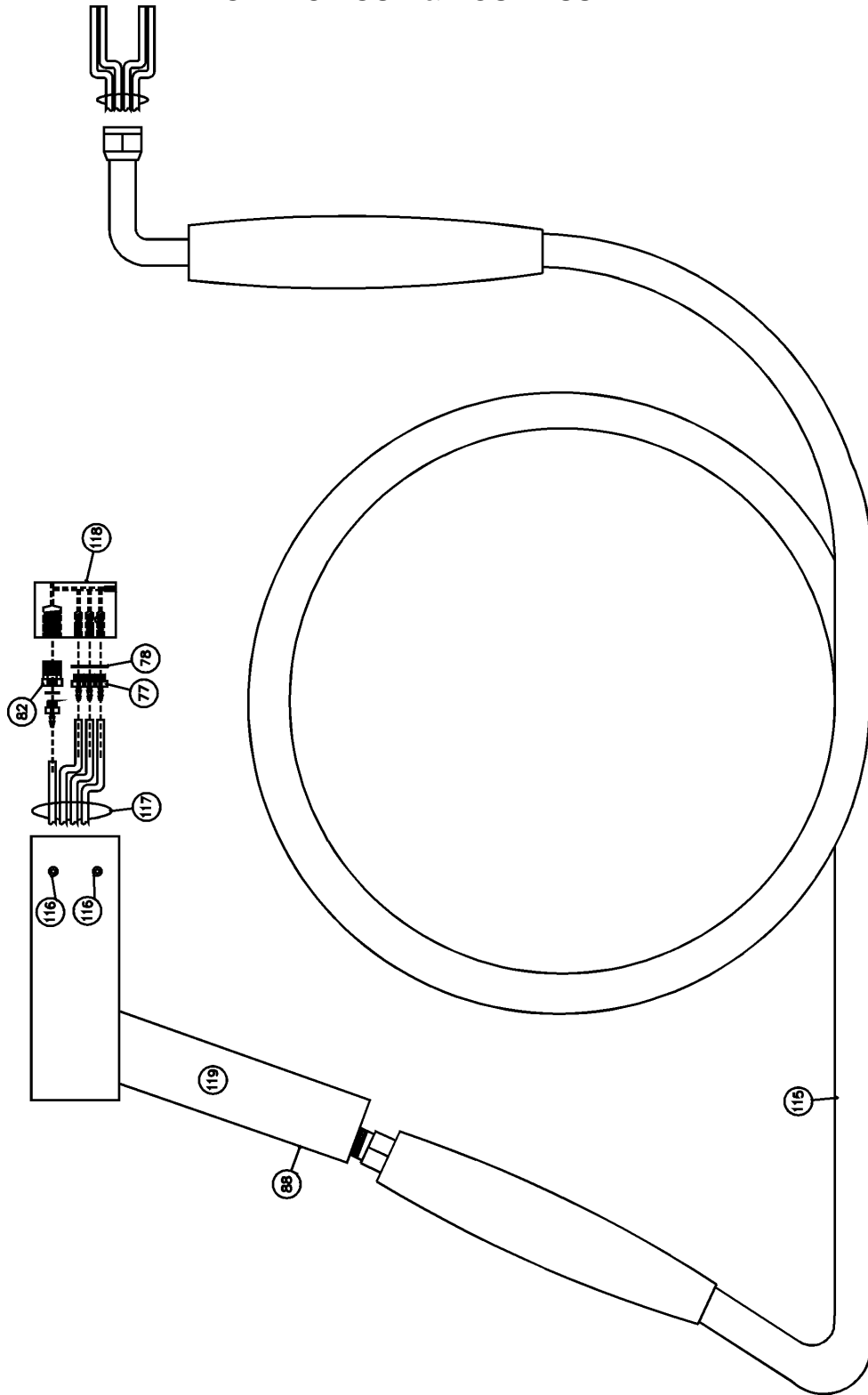
SIDE VIEW OF FRONT METER DOOR 1



INSIDE VIEW OF FRAGRANCE UNIT 1



FRAGRANCE GUN & HOSE ASSEMBLY 1



1034R TIMER INSTALLATION

In order to avoid any confusion, the following is a print out of the 1034R Timer:

1:	Not Used	
2:	Quarter Input	Orange/Black
3:	Horn (-)	Green/Black
4:	Horn (+)	Red/Black
5:	Safety Ground	Lime
6:	24 V Timed Output to Switch	Blue/Black
7.	Token Input	Red/Yellow
8.	Not Used	
9:	24V Common	Green
10:	24V Hot	Orange

PROGRAMMING INSTRUCTIONS

	Bay	Vac	Frag	Sham	
Unit Type	X	X	X	X	Bay (<i>Bay Timer</i>), Vac (<i>Vacuum Timer</i>), Frag (<i>Fragrance Unit-Pole Mount/Stand-Alone Unit</i>), Sham (<i>Shampoo Unit-Pole Mount/Stand-Alone Unit</i>), Fvac (<i>Combo Fragrance/Vacuum Unit</i>), Svac (<i>Combo Shampoo/Vacuum Unit</i>),
Nationality	X	X	X	X	Domestic, International
T	X	X	X	X	Token Value in Number of Quarters
A	X	X	X	X	Base Cost
B	X	X	X	X	Base Time
C	X	X	X	X	Bonus Time
Switched			X	X	Switched, Non Switched
S			X	X	Switch Time
D			X	X	Secondary Base Cost
E			X	X	Secondary Base Time
F			X	X	Secondary Bonus Time
H	X	X	X	X	Number of Horn Beeps at 60 Seconds
I				X	Number of Blow Out Cycles
J				X	Length of Blow Out
K				X	Time Between Blow Out
W	X	X	X	X	Wash Down Time (Bay) or Vac Run Time (Vacuum)
User Password	X	X	X	X	4 Digit Password
Supervisor Password	X	X	X	X	4 Digit Password

BAY PROGRAMMING

- 1) Depress Mode Button until the following words appear: BAY, VAC, FRAG, SHAM, FVAC, SVAC. Use "SET" button to select "BAY" for desired function programming.
 - If you intend to use the timer in a bay – press the mode again
 - The word DOM (Domestic-US) or INTR (International) – Depress "Set" button to select nationality.
 - Press Mode again "T" will appear allowing you to program "Token" setting.
 - If you are using a separate coin acceptor for tokens only – use set button to program token value.
 - If you are not using a separate coin acceptor for tokens disregard this setting.
- 2) Depress mode again "A" will appear – allowing you to program "Turn-On Price" (i.e. \$1.00 to start) using set button each time it is pressed and released it advances \$0.25 up to \$5.00 for turn-on.
- 3) Depress mode again "B" will appear allowing you to program "Time" (i.e. Base time 4:00 minutes) Using set button program time starting with minutes. When total minutes are set, use mode button to advance to seconds :00. Press mode button to advance to next digit :0
- 4) Press mode again "C" appears allowing you to program bonus time or time received for additional quarters. A \$1.00 for 4:00 minutes additional quarter equal 1:00 minute – using mode will advance 1 digit at a time.
- 5) Press mode again "H" allowing you to program horn setting. Use set button to advance one # at a time. Ten is a good number for this.
- 6) Depress mode – "W" will appear allowing you to program "Wash Down Time" when using remote. Use mode to advance 1 digit at a time. *If not using Commander Remote C-1000 disregard this setting.*
 - Program User Password. Program "PIN #" with Set Button move to next digit with mode button.
 - Program Supervisor Password – program "Supervisor Password" with Set Button – move to next digit with mode button.
- 7) Timer is now programmed for In-Bay use.

VAC PROGRAMMING

- 8) Depress Mode Button until the following words appear: BAY, VAC, FRAG, SHAM, FVAC, SVAC. Use "SET" button to select "VAC" for desired function programming.
 - If you intend to use the timer in a VAC – press the mode again
 - The word DOM (Domestic-US) or INTR (International) – Depress "Set" button to select nationality.
 - Press Mode again "T" will appear allowing you to program "Token" setting.
 - If you are using a separate coin acceptor for tokens – use set button to program token value.
 - If you are not using a separate coin acceptor for tokens, disregard this setting.
- 9) Depress mode again "A" will appear – allowing you to program "Turn-On Price" (i.e. \$1.00 to start) using set button each time it is pressed and released it advances \$0.25 up to \$5.00 for turn-on.
- 10) Depress mode again "B" will appear allowing you to program "Time" (i.e. Base time 4:00 minutes) Using set button program time starting with minutes. When total minutes are set, use mode button to advance to seconds :00. Press mode button to advance to next digit :0
- 11) Press mode again "C" appears allowing you to program bonus time or time received for additional quarters. A \$1.00 for 4:00 minutes additional quarter equal 1:00 minute – using mode will advance 1 digit at a time.
- 12) Press mode again "H" allowing you to program horn setting. Use set button to advance one # at a time. Ten is a good number for this.
- 13) Depress mode – "W" will appear allowing you to program "VAC Run Time" when using remote. Use mode to advance 1 digit at a time. *If not using Commander Remote C-1000 disregard this setting.*
 - Program User Password. Program "PIN #" with Set Button move to next digit with mode button.
 - Program Supervisor Password – program "Supervisor Password" with Set Button – move to next digit with mode button.
- 14) Timer is now programmed for vacuum use.

FRAGRANCE and FRAGRANCE/VAC PROGRAMMING

- 15) Depress Mode Button until one of the following words appear: FRAG, FVAC, Use "SET" button to select desired function for programming.
 - 16) Press Mode again - the word DOM (Domestic-US) or INTR (International) – Depress "Set" button to select Nationality.
 - 17) Press Mode again "T" will appear allowing you to program "Token" setting.
 - 18) If you are using a separate coin acceptor for tokens – use set button to program token value.
 - 19) If you are not using tokens – disregard this setting.
 - 20) Depress mode again "A" will appear – allowing you to program "Turn-On Price" (i.e. \$1.00 to start) using set button each time it is pressed and released it advances \$0.25 up to \$5.00 for turn-on.
 - 21) Depress mode again "B" will appear allowing you to program "Time" (i.e. Base time 4:00 minutes) Using set button program time starting with minutes. When total minutes are set, use mode button to advance to seconds :00. Press mode button to advance to next digit :00
 - 22) Press mode again "C" appears allowing you to program bonus time or time received for additional quarters. A \$1.00 for 4:00 minutes additional quarter equal 1:00 minute – using mode will advance 1 digit at a time.
 - 23) Press mode again – the words "Switched" or "Non-Switched" will appear. Select "SET" to selected desired mode.
 - 24) Press mode again "S" will appear allowing you to program switch time. *"Switched/Non-Switched". Switched if you are using fragrance that cost less than vacuum and you select vacuum, the timer will require additional money be deposited and switched time is the time allowed to make additional deposit or timer reverts to fragrance and times out.* (i.e. time 30 seconds) Using set button program time starting with minutes. When total minutes are set, use mode button to advance to seconds :00. Press mode button to advance to next digit :00.
- | | | | |
|---|--------|---|--------|
| A | \$1.00 | D | \$0.75 |
| B | 4:00 | E | 0:45 |
| C | 1:00 | F | 0:15 |
- 25) Depress mode again "D" will appear – allowing you to program "Secondary Base Cost" (i.e. \$1.00 to start) using set button each time it is pressed and released it advances \$0.25 up to \$5.00 for turn-on.
 - 26) Press mode again "E" appears allowing you to program secondary base time or time received for additional quarters. A \$1.00 for 4:00 minutes additional quarter equal 1:00 minute – using mode will advance 1 digit at a time.
 - 27) Press mode again "H" will appear allowing you to program horn setting. Use set button to advance one # at a time. Ten is a good number for this.

- 28) Depress mode – “W” will appear allowing you to program “Vac Run Time” when using remote. Use mode to advance 1 digit at a time. *If not using Commander Remote C-1000 disregard this setting.*
- 29) Program User Password. Program “PIN #” with Set Button move to next digit with mode button.
- 30) Program Supervisor Password – program “Supervisor Password” with Set Button – move to next digit with mode button.
- 31) Timer is now programmed for use in the fragrance or fragrance/vac unit.

SHAMPOOER and SHAMPOO/VAC PROGRAMMING

- 32) Depress Mode Button until one of the following words appears: SHAMP, SVAC, Use “SET” button to select desired function for programming.
- 33) Press mode again - the word DOM (Domestic-US) or INTR (International) – Depress “Set” button to select Nationality.
- 34) Press Mode again “T” will appear allowing you to program “Token” setting.
- 35) If you are using a separate coin acceptor for tokens – use set button to program token value.
- 36) If you are not using tokens – disregard this setting.
- 37) Depress mode again “A” will appear – allowing you to program “Turn-On Price” (i.e. \$1.00 to start) using set button each time it is pressed and released it advances \$0.25 up to \$5.00 for turn-on.
- 38) Depress mode again “B” will appear allowing you to program “Time” (i.e. Base time 4:00 minutes) Using set button program time starting with minutes. When total minutes are set, use mode button to advance to seconds :00. Press mode button to advance to next digit :00
- 39) Press mode again “C” appears allowing you to program bonus time or time received for additional quarters. A \$1.00 for 4:00 minutes additional quarter equal 1:00 minute – using mode will advance 1 digit at a time.
- 40) Press mode again – the words “Switched” or “Non-Switched” will appear. Select “SET” to selected desired mode.
- 41) Press mode again “S” will appear allowing you to program switch time. *“Switched/Non-Switched”. Switched if you are using shampoo that cost less than vacuum and you select vacuum, the timer will require additional money be deposited and switched time is the time allowed to make additional deposit or timer reverts to shampoo and times out.* (i.e. time 30 seconds) Using set button program time starting with minutes. When total minutes are set, use mode button to advance to seconds :00. Press mode button to advance to next digit :00.

A \$1.00	D \$0.75
B 4:00	E 0:45
C 1:00	F 0:15

- 42) Depress mode again "D" will appear – allowing you to program "Secondary Base Cost" (i.e. \$1.00 to start) using set button each time it is pressed and released it advances \$0.25 up to \$5.00 for turn-on.
- 43) Press mode again "E" appears allowing you to program secondary base time or time received for additional quarters. A \$1.00 for 4:00 minutes additional quarter equal 1:00 minute – using mode will advance 1 digit at a time.
- 44) Press mode again "H" will appear allowing you to program horn setting. Use set button to advance one # at a time. Ten is a good number for this.
- 45) Press mode again "I" will appear allowing you to program number of Blow Out Cycles. Use set button to advance one # at a time. 4 is a good number for this.
- 46) Press mode again "J" will appear allowing you to program length of Blow Out. (i.e. time 4:00 minutes) Using set button program time starting with minutes. When total minutes are set, use mode button to advance to seconds :00. Press mode button to advance to next digit :00
- 47) Press mode again "K" will appear allowing you to program time between Blow Out. (i.e. time 2:00 minutes) Using set button program time starting with minutes. When total minutes are set, use mode button to advance to seconds :00. Press mode button to advance to next digit :00.
- 48) Depress mode – "W" will appear allowing you to program "Run Time" when using remote. Use mode to advance 1 digit at a time. *If not using Commander Remote C-1000 disregard this setting.*
- 49) Program User Password. Program "PIN #" with Set Button move to next digit with mode button.
- 50) Program Supervisor Password – program "Supervisor Password" with Set Button – move to next digit with mode button.

Timer is now programmed for use in the shampooer or shampoo/vac unit.

TROUBLESHOOTING

In order to troubleshoot Coleman Hanna Carwash Systems equipment it helps to have knowledge on how the equipment is supposed to operate properly. Please read the following carefully. In normal operation, the fragrance will have a green digital display showing \$.00 - this is your timer and should be lit at all times. The timer will receive inputs and send outputs for proper function. This display requires 24V to be lit at all times. The push button switches on the door and the Sensortron are also 24V hot. When coins are deposited into the Sensortron the timer receives a pulse from the Sensortron telling the timer one coin was deposited. Once the number of coins has been reached you can press the corresponding button sending a signal to the timer telling the timer to send the proper output to the correct relay starting that function. Refer to the wiring diagram (left hand corner) for wire and color controls output and input. (Also refer to "Theory of Operation" on page 2)

1. "NO DISPLAY - WILL NOT ACCEPT MONEY - NOTHING WORKS"

- Vac requires 110V to operate. Check to be sure that 110V are present. If voltage is not present check all breakers. If all is good - call an electrician.
- Check for 110V Power at Breaker inside Cabinet.
- If power is found, then check for 24V coming out of Transformer (Yellow/Blue wires)
- If you do not have 24V then the Transformer is bad.

2. "NO SUCTION"

THEORY: Vac Motors turn pulling air through bottom of motors creating a suction through filter bags and out hole for hose.

- Check for clogged hose - Remove hose - place hand over hole - is there suction now?
- If there is still no suction - check to be sure both motors are running. (Remember - when one motor runs the other motor will turn due to the passing of air).
- Check screen on bottom for dust build up - if there is a build up - remove dust and replace motors.
- If you still do not get results - clean filter bags (dirty filter bags will not allow air to pass through them) leaving you with little or no suction. Also, dirt doors with bad gaskets do not make a good seal leaving you with little or no suction.

3. "NO LED DISPLAY"

THEORY: Timer needs 24V Hot.

- Check for 110V coming in to unit - if no voltage - check for breakers.
- If voltage is present - check transformer (Blue-Hot / Yellow-Neutral).
- If no voltage is coming out of transformer - replace transformer.
- If 24V is coming out of transformer - replace timer.

4. FRAGRANCE WILL NOT START

THEORY: When fragrance button is pressed, air compressor turns on the proper solenoid to supply voltage allowing the opening of the solenoid to allow fragrance to pass. (Note: Moving from left to right on the buttons - the far left button #1 should activate the top solenoid and so on.)

- Turn fragrance on with door open. Press desired fragrance. Place finger over hole in the

end of the stainless steel gun (where fragrance comes out). Does the fragrance blow back into the fragrance container?

- If air or fluid does not come back - check voltage at solenoid - clean solenoid at this time.
- If air or fluid comes back - remove finger and watch to see if fragrance is being picked up - if not you may have either clogged 1/8" tubes or your atomizer may be clogged.

5. FRAGRANCE DRIPS FROM GUN WHEN NOT IN USE

- Turn power OFF.
- Remove black coil from solenoid.
- Use 13mm deep socket - remove stem.
- Clean plunger and spring assy with tire cleaner. Rinse well with water - Reinstall.

6. AIR COMPRESSOR NOT RUNNING

- Unplug compressor - insert proper number of coins. Check plug with voltmeter for 110V with fragrance running. If voltage is not present, check voltage at air compressor relay. If 110V is present - replace air compressor.
- If voltage is not going through relay - swap relays to test relay. If this does nothing - check for 24V to energize relay.
- If no voltage is at air compressor relay - CALL FACTORY.

7. "UNIT WILL NOT ACCEPT COINS"

THEORY: Sensortron needs 24V Hot to accept coins.

- Check for 24V using a voltmeter between yellow wire and black wire coming from Sensortron. If 24V is present, replace Sensortron.
- If no voltage check for 24V coming out of transformer (Yellow-Neutral / Blue-Hot).
- If no voltage, check for 110V coming into transformer (Black-Hot / White-Neutral).
- If voltage is found replace transformer.
- If no voltage check breaker on vac - if good check breaker in equipment room.

8. "VAC UNIT WILL NOT RUN" BUT FRAGRANCE WORKS

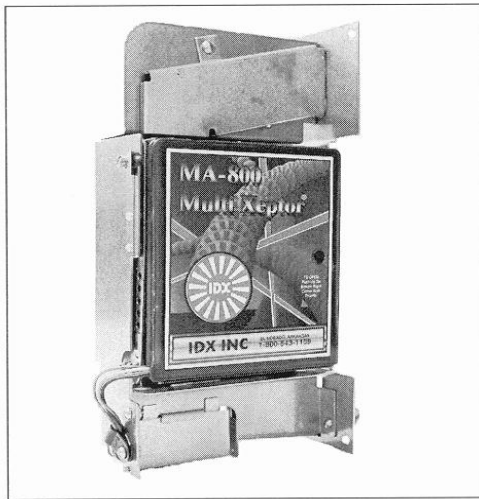
THEORY: Timer receives signal from Sensortron and sends out a signal to mercury relay allowing 110V to pass through turning motors.

- Check for 110V on top of mercury relay.
- Check vac motors for voltage.
- If 110V is not present on top of mercury relay check for 110V coming into relay.
- If relay has 110V, check for 24V to energize relay.
- If 24V is not present check switch - if switch is good - call a service technician.

Models MA800 & MA812

HAWK XEPTOR®

6 or 12 COINS THE SMART MULTI-COIN AND TOKEN ACCEPTORS



IDX Hawk Xeptors® will accept a mixture of different coins and/or tokens- MA800, 6 coins & MA812, 12 coins. The multi-national capability of the MA800 & MA812 Xeptors® makes them the ideal Xeptor® for the OEM's. The Hawk multi-coin Xeptors® do not require a separate handheld programmer to program new coins or change the number of coin pulses per coin. Coin pulses are released through a shielded relay to offer the OEM an easier interface for multiple voltage requirements. This smart thinking Xeptor® continues up date its memory on each coin as the Xeptor® ages.

Digging coin jams out is a thing of the past. The built in coin release opens the chute to drop through bent and mutilated coins. Coin jams are also caused where bent faceplates miss alimnet of the Xeptors® faceplate to meter doors. This has been eliminated with the introduction of a new all stainless steel snap in faceplate model MA19 which relieves the strain from bent doors.

MA800 & MA812 XEPTOR® FEATURES:

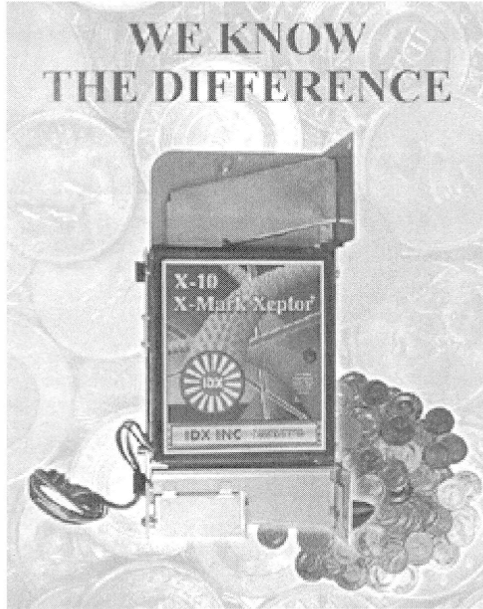
- Standard Preprogrammed with U.S. Quarter and U.S. Dollar coins can be field changed.
- Standard 4 wire hookup – Power wires –Yellow 24VAC Hot / Black 24VAC Common – Coin wires (2) Red Green.
- Power sources 24 VAC standard optional voltages – 12VDC / 24 VDC.
- Distinguishes and accepts any of up to (6) six MA800 or (12) twelve MA812 different coins or tokens of different sizes and/or electronic signatures.
- Standard 2" faceplate footprint.
- Snap in Stainless Steel faceplate MA19 standard.
- Optional old style 2" faceplate model # MA20
- Diameter range examples: 0.700" - 1.126" (17.78 mm to 28.6mm).
- Thickness range settings: 0.087" to 0.130" (Canadian Dime 1.22mm to British 1£ 3.15mm).
- Slide on water resistant access covers.
- Built-in "Credit Test" push button.
- Bent coin release.
- New coin types can be learned or programmed in the field.
- Unwanted shadow coin feature eliminates false acceptance of undesired coins.
- Multi-color indicator LED for operational status.
- Optional credit sense optics for extra security.
- Optional programmable multi-denominational diverter/driver, controls direction for presorting coins.
- Patent Coverage: U.S.#5,046,841 U.S.#6,021,882 U.K.#2,227,347 U.K.#8,929,131 U.K.#9,905,044 U.K.#2,335,207 Aus.#619,639 Aus.#1,952,499 Aus.#4,788,290 Can.#1,313,806 Jap.#9471,1990 Grm.#4,000,197 Others Pending

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Model X10

X-MARK® or SMART MARK® XEPTOR®

THE SMART MULTI-COIN AND ENCODED TOKEN ACCEPTORS



IDX's X10 series of multi-coin Xeptors® will accept a mixture of 6 different coins. This coin mixture can consist of any combination of currencies, tokens and X-Mark® or Smart Mark® encoded security tokens. The X10 Xeptors® has internal programming to allow the operator the ability to program new coins, change the number of coin pulses per coin and field self-diagnostic information. Coin pulses are released through a shielded relay to offer the OEM an easier interface for multiple coin voltage requirements. Other coin outputs are available to meet the different demands of the OEMs. This smart thinking Xeptor® continues up date its memory on each coin as the Xeptor® ages.

Digging coin jams out is a thing of the past. The built in coin release opens the chute to drop through bent and mutilated coins. Coin jams are also caused where bent faceplates are miss alignment with the Xeptors® faceplate to meter doors. This has been eliminated with the introduction of a new all stainless steel snap in faceplate model MA19 which relieves the strain from bent doors.

X10 XEPTOR® FEATURES:

- Standard Preprogrammed with U.S. Quarter and U.S. Dollar coins can be field changed.
- Standard 4 wire hookup – Power wires –Yellow 24VAC Hot / Black 24VAC Common – Coin wires (2) Red Green.
- Power sources 24 VAC standard optional voltages – 12VDC / 24 VDC.
- Distinguishes and accepts any of up to (6) six different coins, tokens, X-Mark®, or Smart Mark® encoded tokens of different sizes and/or different electronic signatures.
- Standard 2" faceplate footprint The Snap in Stainless Steel faceplate model #MA19.
- Optional old style faceplate model # MA20.
- Diameter range examples: 0.700"- 1.073" (17.8 mm to 27.3mm)/ 0.900"- 1.125" (22.8 mm to 28.6mm).
- Thickness range settings: 0.087" to 0.130" (Canadian Dime 1.22mm to British 1£ 3.15mm).
- Slide on water resistant access covers.
- Built-in "Credit Test" push button.
- Bent coin release.
- New coin types can be learned or programmed in the field.
- Unwanted shadow coin feature eliminates false acceptance of undesired coins.
- Multi-color indicator LED for operational status.
- Optional credit sense optics for extra security.
- Optional programmable multi-denominational diverter controls direction for presorting coins.
- Patent Coverage: U.S.#5,046,841 U.S.#6,021,882 U.K.#2,227,347 U.K.#8,929,131 U.K.#9,905,044 U.K.#2,335,207 Aus.#619,639 Aus.#1,952,499 Aus.#4,788,290 Can.#1,313,806 Jap.#9471,1990 Grm.#4,000,197 Others Pending

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Models MA800/MA803/MA812/X10/X10CM Coin Learn & Field Test Procedure



COIN LEARN PROCEDURE

- Slide the front cover up and identify the three controls to be used in this procedure:
 - Black or Red push button near center bottom. (used to input the number of credit pulses)
 - 16 position rotary switch to the right of the push-button. (#0 is normal RUN position, #1-#6 are for learning each of 6 possible coin types that can be accepted) **MA812** (#0 is normal RUN position, #1-#9 and #A, #B,#C are for learning each of 12 possible coin types that can be accepted)
 - LED indicator half way up on the right side. (Green in RUN mode, red in LEARN mode)
- Turn the rotary switch to one of the LEARN positions #1-#6 or #1-#C (for example, pick #3 for learning the 3rd coin type) and observe the LED turns red to indicate it is now ready to learn.
- Push the black or red button once for each credit pulse you wish to have issued for this coin. For example, a \$1 coin would require 4 credit pulses if you are also accepting \$0.25 coins, one credit pulse per quarter.
- Slide the cover back on the unit to make sure outside light does not interfere with the sensors.**
- Show the unit **6 different samples** of the coin by depositing them into the acceptor as usual. It is best to use 6 different coins since there are typically slight variations from coin-to-coin.
- After the 6th sample coin is deposited, the LED will flash red-green a few times to indicate the LEARN procedure is complete and the coin parameters are stored in memory.
- Slide the front cover open again and turn the rotary switch back to position #0 and observe the LED turning green. Check that you have not accidentally turned it too far to position #15 which is a field test function position, in which it will not accept coins.
- Slide the front cover back down and you should now be able to accept the new coin.

UNWANTED COIN FEATURE

- Use the same coin learn procedures as above.
- THE COIN YOU DO NOT WANT TO ACCEPT MUST BE LEARNED IN COIN POSITION #1. Turn to position #1 and press the test button 13 times, **drop the same sample coin through that you do not want to accept 6 times.** NEXT LEARN THE COIN YOU WANT TO ACCEPT IN COIN POSITION #2. Turn to position #2 and press the test button for the number of times for the value of your coin to be accepted, **drop the same sample coin through that you do want to accept 6 times.** Now turn back to "0" the operating position.

COIN DE-LEARN PROCEDURE

- Slide the front cover up and turn the rotary switch to the coin # position you wish to DE-LEARN.
- Push the black or red button once to initiate the LEARN sequence.
- Turn the rotary switch back to position #0 without depositing any coins to signal the unit that you wish it to erase the parameters for this coin. The LED will flash red-green to indicate completion.
- Slide the front cover back down.

FIELD TESTS & DIAGNOSTICS FOR MA800/MA803/X10/X10CM (NOT MA812'S)

Normal operation in switch position #0 is shown by a green LED. If the LED is flashing yellow or alternately red-green, it indicates a malfunction has been detected. Some malfunctions can be corrected in the field. [See below.](#)

GATE RELAY TEST (rotary switch #0)

Press the black or red button to activate the gate relay. If not normal, it may be physically obstructed or its wire unplugged.

INDUCTIVE METAL SENSOR TESTS (rotary switch #E, #F)

Turn the rotary switch to positions #E and #F to test the inductive sensor. Normal LED color is green. A red color indicates either there is metal in front of the inductive sensors or the circuit is malfunctioning(usually the rear flat cable unplugged).

DIAMETER OPTICS SENSOR TESTS (rotary switch #B, #C, #D)

Turn the rotary switch to positions #B, #C, and #D to test the diameter thru-beam optical sensors. Normal LED color is green. A red or orange color indicated either there is an object or dirt blocking one of these three sensors and cleaning of the coin chute is required, or the circuit is malfunctioning.

X-MARK® CODE OPTICS SENSOR CALIBRATION (rotary switch #9, #A for Model X-10 only)

Fold a piece of white paper twice (to 4 thicknesses) and insert it into the center of the coin chute. Turn the rotary switch to position #9 (rear side optics)and press the black or red button. The unit will use information gathered to calibrate the sensitivity of its reflective sensors for reading the X-Mark® optical code on tokens. The LED should be an orange color after calibration. Repeat for switch position #A (front side optics).

CREDIT SENSOR TEST (rotary switch #8)

Turn the rotary switch to position #8 to test the Credit Sensors (V2.0 chip and after). If not installed the LED will blink yellow, if installed and in good order it will be green, if installed and dirty or blocked, orange to red color.

MEMORY TEST (rotary switch #7)

Turn the rotary switch to positions #7 to test the validity of memory. Normal LED color is green. A red color indicates that memory is corrupted. It may be possible to correct this by re-learning the coins. If not, the memory chip is bad.

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Programming Via the Mode and Set Switch

There are two buttons located on the back of the timer that are used for setting the price and time, as well as retrieving information.

Initial Setup of New Timers

When you first receive your timer and power it up, the display will be flashing zeros. This indicates that the timer needs to be programmed to function properly. The following menus indicate the information that will need to be input to make the timer function properly.

Menus

Let's start by explaining the purpose of each menu.

MENUS FOR VACUUM	
<i>Menu</i>	<i>Valid Entries</i>
A. Number of Coins to Start Vacuum	Valid entries are from 1 to 20 coins to start the vacuum
B. Number of Seconds per Vacuum	This menu creates some confusion for customers. TYPICALLY THIS NUMBER IS LEFT AT ZERO. The menu is in place for those customers who have a wash that starts at 3:30, for example. In this case, you would enter the :30 at this point. Valid entries are from :00 to :59.
C. Number of Minutes Per Vacuum	Valid entries are from 0 to 9.
D. Number of Times Warning Horn Beeps	This is the number of times the user would like the warning horn to sound at the one-minute mark. Valid entries are from :00 to :59. If the menu is left at :00, the warning horn is disabled.
H. Amount of Time per Coin After the Start-Up Price is Satisfied.	This is the amount of time that the customer will receive for each additional coin deposited after the initial turn-on price is deposited.

MENUS FOR FRAGRANCE	
<i>Menu</i>	<i>Valid Entries</i>
When the "H" menu is complete, press the mode switch. Menus "A" - "H" will repeat, allowing you to enter the fragrance information.	
A. Number of Coins to Start Fragrance	Valid entries are from 1 to 20 coins to start the vacuum/fragrance machine
B. Number of Seconds per Fragrance	This menu creates some confusion for customers. TYPICALLY THIS NUMBER IS LEFT AT ZERO. The menu is in place for those customers who have a wash that starts at 3:30, for example. In this case, you would enter the :30 at this point. Valid entries are from :00 to :59.
C. Number of Minutes Per Fragrance	Valid entries are from 0 to 9.
D. Number of Times Warning Horn Beeps	This is the number of times the user would like the warning horn to sound at the one-minute mark. Valid entries are from :00 to :59. If the menu is left at :00, the warning horn is disabled.
H. Amount of Time per Coin After the Start-Up Price is Satisfied.	This is the amount of time that the customer will receive for each additional coin deposited after the initial turn-on price is deposited.
E. Four-digit PIN Code	This menu is used to input the Personal Identification Number. This number is used to access the timer via the hand-held remote control.
F: Vacuum Test Time	This function sets the amount of time the user can test the vacuum by using the "TEST" feature on the remote control. Valid entries are from 0:00 to 9:00. If the unit is set to 0:00, this feature is disabled.

Programming

Now, let's walk through the programming of the timer, step by step. Begin by pressing and holding down for five (5) seconds the mode switch. The display will now show the "A" menu. Now press the set switch until you reach the number of coins it takes to start your vacuum. (Don't worry if you accidentally go past your number; the timer "wraps around" when you exceed 20.) Also, note that anytime you press and hold the set switch, the display increments at 1/2 second increments.

Vacuum

Once you have the proper number displayed on the "A" menu, press the mode switch and release it. This display will now show the "B" menu. Now, using the set switch, input the number of seconds, if any, that you have in your initial vacuum cycle.

Press the mode switch, and the display will show the "C" menu. Using the set switch, enter the number of minutes you have in your initial vacuum cycle.

Press the mode switch, and the "D" menu appears. Using the set switch, enter the number of seconds that you want the warning horn to sound at the one-minute mark when a customer is using the vacuum.

Press the mode switch, and the "H" menu appears. Using the set switch, enter the amount of time that the customer should receive upon depositing additional coins after the vacuum turn-on price has been satisfied.

Fragrance

At this point, menus “A” - “H”, above, will repeat, allowing you to input the correct fragrance information.

Press the mode switch, and the “A” menu appears, again. This time, use the set switch to input the number of coins it takes to start your fragrance machine.

Press the mode switch, and the “B” menu appears. Now, using the set switch, input the number of seconds, if any, that you have in your initial fragrance cycle.

Press the mode switch, and the display will show the “C” menu. Using the set switch, enter the number of minutes you have in your initial fragrance cycle.

Press the mode switch, and the “D” menu appears. Using the set switch, enter the number of seconds that you want the warning horn to sound at the one-minute mark when a customer is using the fragrance machine.

Press the mode switch, and the “H” menu appears. Using the set switch, enter the amount of time that the customer should receive upon depositing additional coins after the fragrance turn-on price has been satisfied.

Press the mode switch, and the “E” menu appears. Press the switch until the first digit of the PIN code you have selected appears. Continue pressing the mode and set switches to enter each individual digit of the four-digit PIN code you have selected.

Press the mode switch, and the “F” menu appears. Using the set switch, enter the number of minutes that the timer will run while testing the vacuum, using the hand-held remote control.

Now, press the mode switch one final time, and the timer will display the \$.00 and add up as coins are deposited. Congratulations! You're finished programming!

Accessing Timer Functions

Resettable Coin Counter - Once the timer is set up, you can access the coin-count function via the set switch. By pressing and releasing the set switch, the timer will display the number of coins that have been input for two seconds. Next, the timer will display the number of vacuum cycles for two seconds, then the number of fragrance cycles for two seconds. If you hold the set switch engaged for five seconds, the timer will zero this amount.

Modifying Existing Programs - To modify existing programs, press and hold the mode switch until the timer begins flashing zeros. Now release the mode switch, and the timer will return to the “A” Menu for set up. The timer “remembers” the previously programmed values. This is helpful if you are only changing one portion of the program. By repeatedly pressing the mode switch, you are able to step through the menus until you reach the item you wish to modify.

Programming Via the hand-held Remote Controller

Modifying Existing Programs

Note: The timer must be set up using the mode and set switches on the back of the timer before the remote control will function.

To use the remote control, point the front of the remote directly at the front of the timer, and be within a two foot range. Now slowly input the PIN code by pressing the appropriate number on the key pad. After the proper code has been set into the timer, the warning horn will beep for a half-second. This indicates that the proper code has been input, and the time is waiting for further instructions.

Three important items need to be addressed at this point:

1. Once the four-digit PIN has been entered and the timer beeps, if no further command is received for seven seconds, the timer automatically reverts back to normal operation. You will now have to input your PIN code once again to access your timer. This prevents you from inputting your code and inadvertently walking away, leaving the timer disabled.
2. While the timer is being accessed by remote control, it will not accept coins or tokens.
3. Only the means "A", "B", "C", "D" and "H" may be accessed using the remote control. This gives the owner more security over improper use of the remote control by an attendant.

Once the PIN code has been entered, and before seven seconds has elapsed, you can do any of the following:

- **Modify Setup Parameters** - Access the feature by pressing the mode switch on the remote. Now the setup is similar to the setup using the mode and set switches during initial programming. The only major differences are that the remote control has an up/down feature for the set switch. This allows you to rapidly increment or decrement a setting.
- **Obtain Quarter Count** - Press the COIN button to obtain a coin readout of the number that have been dropped. If you hold this button for five (5) seconds, the number will zero.
- **Obtain Test Count** - Press the TEST CYCLES button to obtain the number of times an attendant has used the test feature. This feature is non-resettable.
- **Use Test Feature** - Press the TEST button, and the timed output from the timer turns on the vacuum. The display indicates "TEST" to remind you that the timer is in the test mode. You may press CNCL to cancel this time if you are finished early. Otherwise, the timer will "time out" after the amount of time you have set in the "F" menu during the initial programming.

Example of Typical Set-up

I have a vacuum/fragrance machine that requires \$1.00 to start that vacuum, and \$1.00 to start the fragrance machine. The vacuum cycle lasts for a period of four minutes, while the fragrance cycle lasts for forty-five seconds. At the one minute mark, I want to alert my customer, with five (5) beeps, that time is about to run out. A customer depositing additional coins while using the vacuum will receive



one minute of time for each coin. A customer depositing additional coins while using the fragrance machine will receive eleven seconds for each coin. I have chosen 3459 as my Personal Identification Number (PIN). I know that it takes me about three minutes to test my vacuum fragrance machine. *The following is how I would set up my timer.*

Menu Entry	Description
A:04	Coins Required to Turn on Vacuum
B :00	Seconds Vacuum Cycle will Run
C4:00	Minutes Vacuum Cycle will Run
D :05	Number of Times Warning Horn will Sound.
H1:00	Amount of Time Earned by Depositing Additional Coins
A:04	Coins Required to Turn on Fragrance Machine
B:45	Seconds Fragrance Cycle will Run
C:00	Minutes Fragrance Cycle will Run
D:05	Number of Times Warning Horn will Sound
H:11	Amount of Time Earned by Depositing Additional Coins
3EEE 34EE 345E 3459	Personal Identification Number (PIN#)
F3:00	Time the Test Function Runs for.

My timer is now set up and ready for operation.