

No	Qty	DESCRIPTION	# MANARAS	REV
1	2	6-32 X 5/8 TYPE F S-TAP. SCREW	SCREW095	
2	1	10-24 X 3/4 TYPE F S-TAP. SCREW	SCREW023	
3	4	10-24 X 3/8 TYPE T S-TAP. SCREW	SCREW022	
4	4	10-32 HEX SERRATED FLANG NUT ZP	NUT062	
5	1	#41-1R48P(INCL.IC/L)	CHAIN059	
6	1	#410-1R32P(INCL.IC/L)	CHAIN006	
7	2	1" ID 2-BOLT FLANGE BEARING	BEARING012	
8	4	1/4-20 X 5/16 SET SCREW	SCREW001	
9	8	1/4-28 X 1/4 SET SCREW	SCREW002	
10	8	3/8-16 HEX NUT ZP	NUT010	
11	8	3/8-16 X 1-1/4 RND HD SO NECK BOLT	BOLT059	
12	1	410B12 X 1 K1/4 2S5/16-18 PH1/4 CR	SPR410B12X1	1
13	1	410B9 X 3/8 K0 2S1/4-20	SPR410B9X3/8	
14	1	41B12 X 1 K1/4 2S5/16-18 PH1/4 CR	SPR41B12X1	5
15	1	41B36 X 1 K1/4 2S5/16-18	SPR41B36X1	4
16	1	41B9 X 5/8 K3/16 2S1/4-20 CR	SPR41B9X5/8	4
17	4	5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
18	4	5/16-18 TRI-GROOVE TAMPER RES. NUT ZP STEEL	NUT064	0
19	8	5/16-18 X 3/4 RND HD SO NECK BOLT	BOLT093	
20	7	5/16-18 X 5/16 SET SCREW	SCREW003	
21	2	5/8-18 HEX JAM NUT ZP	NUT013	
22	1	ALU PULLEY 3.000 X 5/8	PULLEY030	
23	1	AX SECTION COGGED V-BELT	VBELTAX31	
24	8	BELLEVILLE WASHER (.31.5X16.3X0.8)	WASHER035	
25	1	CL.PAD 5/8x4x0.125"	CLUTCHPAD005	3
26	1	CLUTCHPLATE 5/8	CLUTCHPLATE004	3
27	2	COLLAR 1"	COLLAR007	
28	2	EXT. SELF-LOCKING RET. RING 3/8" CURVED RIM	CLIP021	
29	2	FLANGE PILLOW BLOCK 0.75	BEARING044	
30	1	FLT WASHER 3/8 (.391X.750X.130) ZP	WASHER064	0
31	1	FRAME OTH/OTBH/OSL - MAIN FRAME	FRAME053	3
32	1	FRAME OTH/OTBH/OSL - SUBFRAME	FRAME054	2
33	8	HELICAL SPRING LOCK WASHER 3/8 ZP	WASHER030	
34	4	HELICAL SPRING LOCK WASHER 5/16 ZP	WASHER028	
35	1	INPUT SHAFT OTH-OTBH-OSL	SHAFT080	3
36	1	KEY 1/4 X 1	KW021	5
37	1	KEY 3/16 X 2.50 (INCL. W/ MOTOR)	KEY	5
38	1	KEY 3/16 X 3/4	KW010	5
39	2	LIMIT SHAFT BUSHING LOCK WASHER	WASHER066	2
40	1	MOTOR	SEE TABLE	
41	1	OPERA CONTROL BOX - DRIVE	CBOX043	1
42	1	OPERA CONTROL BOX COVER	COVER047	9
43	2	OPERA LIMIT SHAFT BUSHING	BUSHING055	1
44	1	OTBH-A DRUM BRAKE	BRAKE015X	
45	1	PIN COTTER 1/8 X 3	PIN002	
46	1	PIN SLOTTED SPRING 1/4 x 1.5	PIN010	
47	1	PIN SLOTTED SPRING 3/16 x 1.5	PIN007	
48	1	PULLEY 7" x 5/8" 5L/B	PULLEY020	5
49	1	PUSH NUT #10	CLIP015	
50	1	TROLLEY OUTPUT SHAFT	SHAFT048	6
51	2	TYPE A PLAIN WASHER 5/8 N ZP	WASHER014	0

MOTOR TABLE		
	DESCRIPTION	# MANARAS
1/2 HP	MOTOR 1/2HP - 208V/460V - 3PH	MOTOR271
1 HP	MOTOR 1HP - 208V/460V - 3PH	MOTOR275

PART DESCRIPTION
OPERA TROLLEY VFD

PART NUMBER OTBH-6XXX-AXVF	MANARAS-OPERA 136 ONEIDA DRIVE POINTE-CLAIRE, QC, H9R 1A8
DRAWN BY: J.Proulx	TEL: 1-800-361-2260
DATE: 2014-10-03	FAX: 1-888-626-0606
UPDATED BY:	
DATE:	

Manaras
Opera

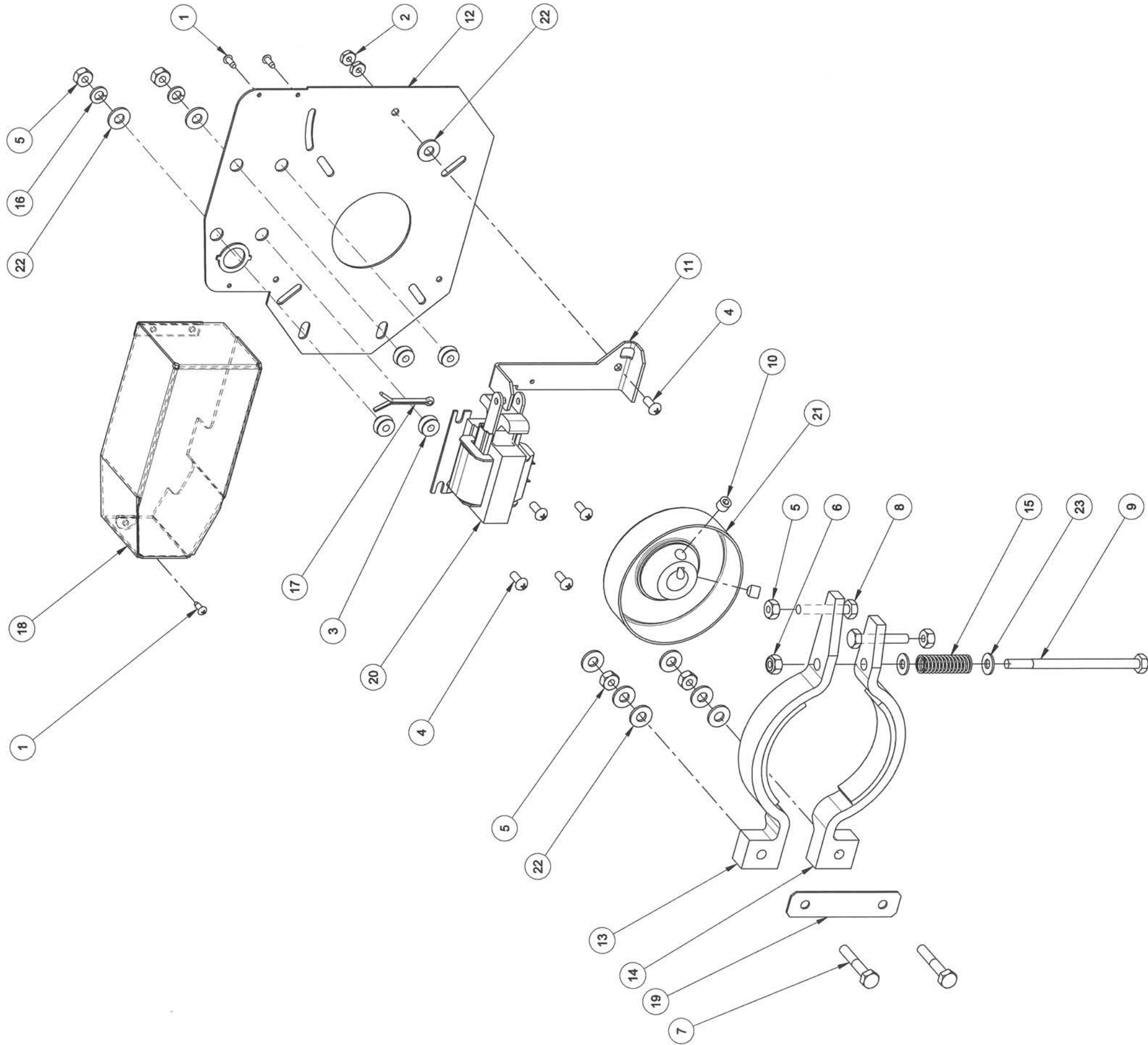
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A B C D

Qty	# MANARAS	DESCRIPTION
1	SOLENOID SWITCH 120V	
1	SOLENOID SWITCH 240V	
1	SOLENOID SWITCH 240V	
1	SOLENOID SWITCH 440V	
1	SOLENOID SWITCH 575V	

No	Qty	DESCRIPTION	# MANARAS	REV
1	3	6-32 X 3/8 TYPE T S-TAP SCREW	SCREW004	
2	2	10-32 HEX NUT ZP	NUT005	
3	4	10-32 WELL-NUT VIBRATION ISOLATOR	ISOLATOR002	
4	5	10-32 X 1/2 MACHINE SCREW	SCREW004	
5	6	1/4-20 HEX NUT ZP	NUT006	
6	1	1/4-20 HEX NYLON LOCK NUT ZP	NUT020	
7	2	1/4-20 X 1-1/2 HEX BOLT	BOLT008	
8	2	1/4-20 X 1-1/2 HEX BOLT	BOLT010	
9	1	1/4-20 X 4 HEX BOLT	BOLT016	
10	2	5/16-18 X 5/16 SET SCREW	SCREW003	
11	1	BRAKE LEVER (DRUM BRAKE)	LEVER005	
12	1	BRAKE PLATE ANTI-VIBRATION	PLATE007	0
13	1	BRAKE SHOE LONG	SHOE022	
14	1	BRAKE SHOE SHORT	SHOE021	
15	1	BRAKE SPRING	SPRING002	
16	2	HELICAL SPRING LOCK WASHER 1/4 ZP	WASHER028	
17	1	PIN COTTER 1/8 X 1-1/2	PIN001	
18	1	PLATED SOLENOID COVER	COVER048	5
19	1	SHOE SPREADER BRACKET	BRACKET228	0
20	1	SOLENOID	SEE TABLE	
21	1	STEEL BRAKE DRUM 5/8 FLAT TRACK	DRUM006	0
22	9	TYPE A PLAIN WASHER 1/4 N ZP	WASHER004	0
23	2	TYPE A PLAIN WASHER 3/16 ZP	WASHER003	0



PART DESCRIPTION
OTBH-A DRUM BRAKE

PART NUMBER
BRAKE015X

MANARAS-OPERA
136 ONEIDA DRIVE
POINTE-CLAIRE, QC, H9R 1A8
TEL: 1-800-361-2260
FAX: 1-888-626-0606

MANARAS
Opera

DRAWN BY:
L.F. MARCEAU

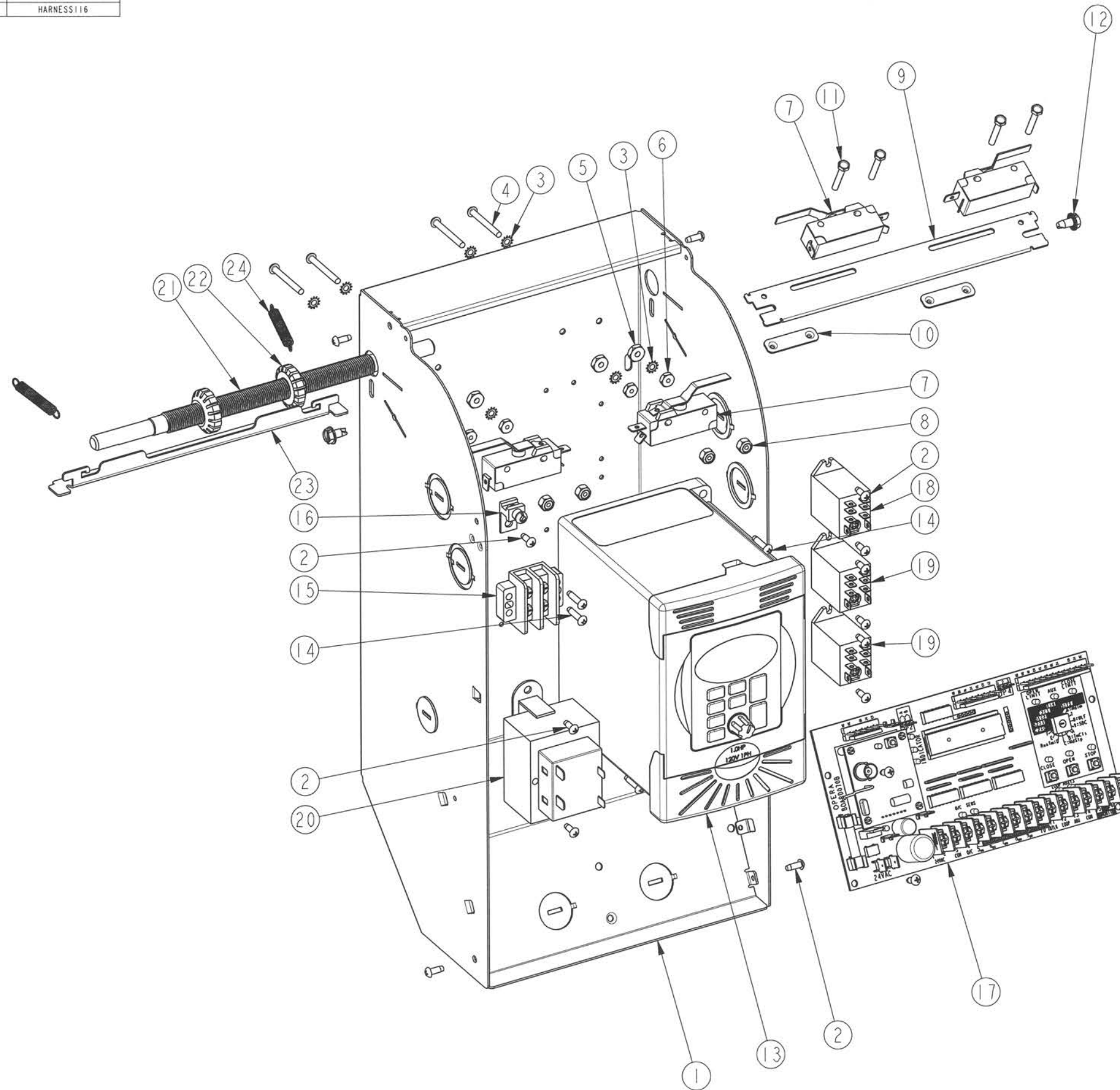
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LAST UPDATE: INITIAL

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HARNESS		
Qty	DESCRIPTION	# MANARAS
1	CONTROL HARNESS	HARNESS116



No	Qty	DESCRIPTION	# MANARAS	REV
1	1	OPERA CONTROL BOX - DRIVE	CBOX043	1
2	17	6-32 X 3/8 TYPE T S-TAP, SCREW	SCREW094	
3	8	EXTERNAL TOOTH LOCKWASHER NO 6 ZP	WASHER067	0
4	4	6-32 X 1.25 MACHINE SCREW	SCREW109	
5	4	10-24 HEX NUT ZP	NUT004	
6	4	6-32 HEX NUT ZP	NUT002	
7	4	SINGLE LIMIT SWITCH - LEVER 46 DEG	LIMIT023	4
8	4	6-32 HEX NYLON LOCK NUT ZP	NUT018	
9	1	ADV LS BRACKET	BRACKET245	4
10	2	LS MOUNTING BRKT	BRACKET246	2
11	4	6-32 X 7/8 MACHINE SCREW HEX HD	SCREW117	
12	2	10-24 X 3/8 TYPE T S-TAP, SCREW	SCREW022	
13	1	AC DRIVE 1/2HP 120V 1PH	DRIVE013B	
14	4	6-32 X 5/8 TYPE F S-TAP, SCREW	SCREW095	
15	1	TERMINAL STRIP 2 POSITIONS	TSTRIP009	
16	1	GROUND LUG TA61G-UL	CONNECTOR039	
17	1	STD ELECT. CONTR. BOARD	BOARD070	
18	1	DPDT 24V RELAY	RELAY024	
19	2	DPDT 24VDC RELAY	RELAY052	
20	1	TRANSFO 120/240-24 40VA	TRANSF143	
21	1	OPERA LIMIT SHAFT	SHAFT103	6
22	2	CAM LIMIT OPERA	CAM011	2
23	1	OPERA CBOX CAMPLATE	CAMPLATE019	5
24	2	TOGGLE SWITCH SPRING	SPRING030	

PART DESCRIPTION		
CBOX WITH DRIVE		
PART NUMBER	MANARAS-OPERA	
CBOX-VF	136 ONEIDA DRIVE	
DRAWN BY: J.Proulx	POINTE-CLAIRE, QC, H9R 1A8	
DATE: 2014-10-01	TEL: 1-800-361-2260	
UPDATED BY: --	FAX: 1-888-626-0606	
DATE: --		

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