

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. 1C/L)	CHAIN059	
6	1	#41-1R32P(INCL. 1C/L)	CHAIN006	
7	2	1" ID 2-BOLT FLANGE BEARING	BEARING012	
8	4	1/4-20 HEX NUT ZP	NUT006	
9	4	1/4-20 X 5/16 SET SCREW	SCREW001	
10	8	1/4-28 X 1/4 SET SCREW	SCREW002	
11	4	3/8 BOLT MOUNT VIBRATION ISOLATOR	ISOLATOR001	
12	2	3/8 BOLT MOUNT VIBRATION ISOLATOR	ISOLATOR005	---
13	8	3/8-16 HEX NUT ZP	NUT010	
14	2	3/8-16 HEX SERRATED FLANG NUT Z	NUT058	
15	8	3/8-16 X 1-1/4 RND HD SQ NECK BOLT	BOLT059	
16	2	3/8-16 X 2-1/4 HEX BOLT	BOLT031	
17	1	410B12 X 1 K1/4 2S5/16-18 PH1/4 CR	SPR410B12X1	1
18	1	410B9 X 3/8 KO 2S1/4-20	SPR410B9X3/8	
19	1	41B12 X 1 K1/4 2S5/16-18 PH1/4 CR	SPR41B12X1	5
20	1	41B36 X 1 K1/4 2S5/16-18	SPR41B36X1	4
21	1	41B9 X 5/8 K3/16 2S1/4-20 CR	SPR41B9X5/8	4
22	4	5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
23	4	5/16-18 TRI-GROOVE TAMPER RES. NUT ZP STEEL	NUT064	0
24	4	5/16-18 X 1 HEX BOLT	BOLT019	
25	4	5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
26	8	5/16-18 X 5/16 SET SCREW	SCREW003	
27	2	5/8-18 HEX JAM NUT ZP	NUT013	
28	1	ANTI-VIBRATION MOUNTING BRACKET	BRACKET258	0
29	1	AX SECTION COGGED V-BELT	VBELTAX30	
30	8	BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
31	1	CL. PAD 5/8x4x0.125"	CLUTCHPAD005	3
32	1	CLUTCHPLATE 5/8	CLUTCHPLATE004	3
33	2	COLLAR 1"	COLLAR007	
34	2	EXT. SELF-LOCKING RET. RING 3/8" CURVED RIM	CLIP021	
35	2	FLANGE PILLW BLOCK 0.75	BEARING044	
36	1	FLT WASHER 3/8 (.391X.750X.130) ZP	WASHER064	0
37	1	FRAME OTH/OTBH/OSL - MAIN FRAME	FRAME053	3
38	1	FRAME OTH/OTBH/OSL - SUBFRAME	FRAME056	0
39	10	HELICAL SPRING LOCK WASHER 3/8 ZP	WASHER030	
40	8	HELICAL SPRING LOCK WASHER 5/16 ZP	WASHER028	
41	1	INPUT SHAFT OTH-OTBH-OSL	SHAFT080	3
42	1	KEY 1/4 X 1	KW021	5
43	1	KEY 3/16 X 2.50 (INCL. W/ MOTOR)	KEY	5
44	1	KEY 3/16 X 3/4	KW010	5
45	2	LARGE DIA. FLAT WASHER 3/8	WASHER071	
46	2	LIMIT SHAFT BUSING LOCK WASHER	WASHER066	2
47	1	MOTOR	MOTOR	
48	1	MOTOR PULLEY 0.625"	PULLEY012	
49	1	OPERA CONTROL BOX	CBOX04x	---
50	1	OPERA CONTROL BOX COVER	COVER047	9
51	2	OPERA LIMIT SHAFT BUSHING	BUSHING055	1
52	1	OTBH-A DRUM BRAKE	BRAKE015X	
53	1	PIN COTTER 1/8 X 3	PIN002	
54	1	PIN SLOTTED SPRING 1/4 X 1.5	PIN010	
55	1	PIN SLOTTED SPRING 3/16 X 1.5	PIN007	
56	1	PULLEY 7" x 5/8" 5L/8	PULLEY020	5
57	1	PUSH NUT #10	CLIP015	
58	1	TROLLEY OUTPUT SHAFT	SHAFT048	6
59	4	TYPE A PLAIN WASHER 5/16 W ZP	WASHER008	0
60	2	TYPE A PLAIN WASHER 5/8 N ZP	WASHER014	0
61	2	WASHER 3/8 X 1/4 THK 1-3/8 OD	WASHER070	0

	DESCRIPTION	# MANARAS
120V - 1PH	MOTOR 1/2HP - 120V/230V - 1PH	MOTOR257
	IPH - 8 AMPS RESET	RESET005
	MOTOR 3/4HP - 120V/230V - 1PH	MOTOR258
230V - 1PH	IPH - 13 AMPS RESET	RESET010
	MOTOR 1HP - 120V/230V - 1PH	MOTOR259
	IPH - 16 AMPS RESET	RESET013
230V - 3PH	MOTOR 1/2HP - 120V/230V - 1PH	MOTOR257
	IPH - 4 AMPS RESET	RESET001
	MOTOR 3/4HP - 120V/230V - 1PH	MOTOR258
460V 208V 3PH	IPH - 7 AMPS RESET	RESET004
	MOTOR 1HP - 120V/230V - 1PH	MOTOR259
	IPH - 8 AMPS RESET	RESET005
575V 3PH	MOTOR 1/2HP - 208V/460V - 3PH	MOTOR277
	MOTOR 3/4HP - 208V/460V - 3PH	MOTOR279
	MOTOR 1HP - 208V/460V - 3PH	MOTOR281
575V 3PH	MOTOR 1/2HP - 208V/460V - 3PH	MOTOR277
	MOTOR 3/4HP - 208V/460V - 3PH	MOTOR279
	MOTOR 1HP - 208V/460V - 3PH	MOTOR281
575V 3PH	MOTOR 1/2HP - 575V - 3PH	MOTOR278
	MOTOR 3/4HP - 575V - 3PH	MOTOR280
	MOTOR 1HP - 575V - 3PH	MOTOR282

PART DESCRIPTION

OPERA TROLLEY AX06

PART NUMBER: **OTBH-6XXX-AX06**

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

DRAWN BY: LFM
DATE: 2014.04.15

UPDATED BY: J.Proulx
DATE: 2014.09.10

Manaras
Opera

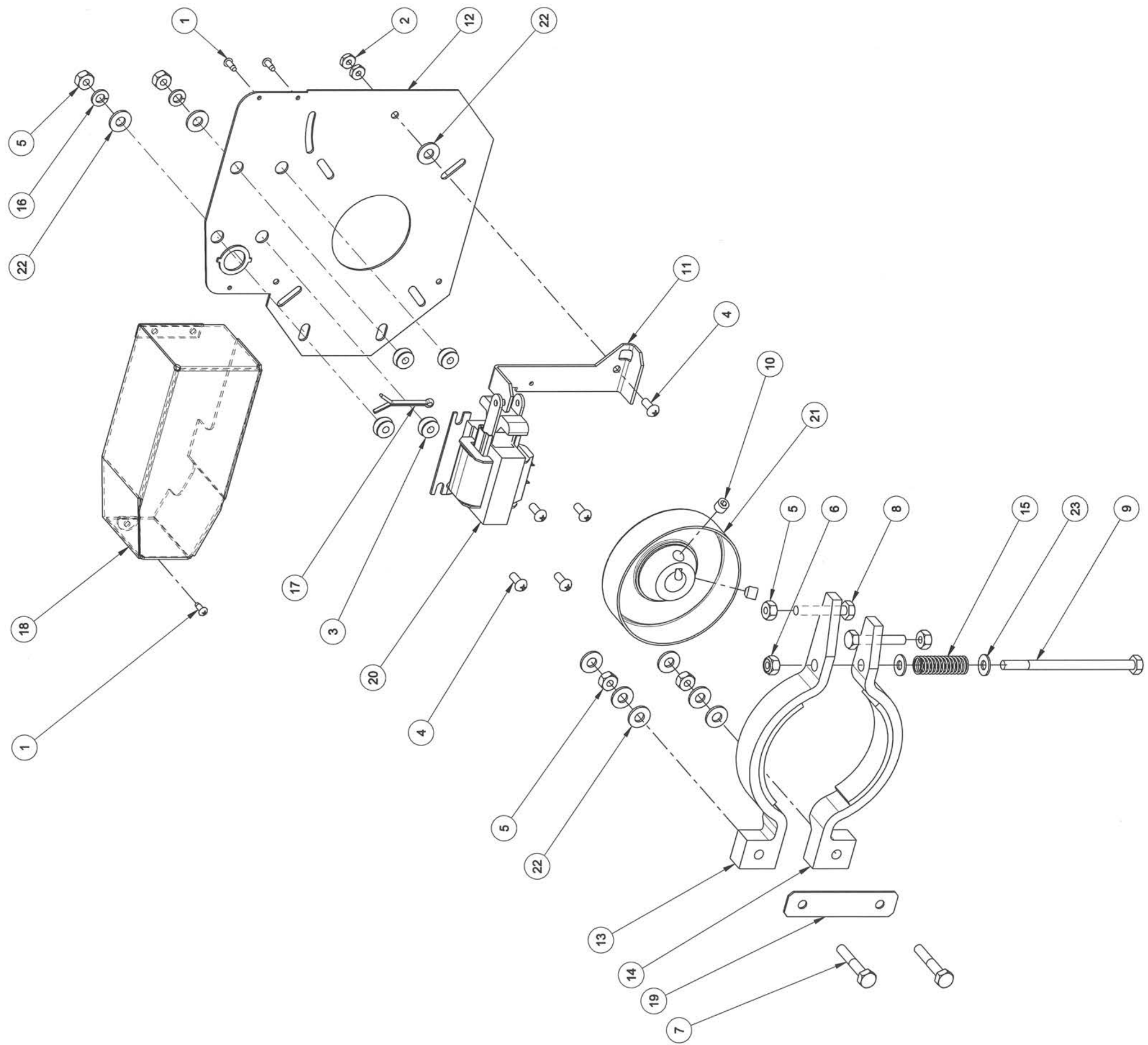
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Qty	DESCRIPTION	# MANARAS
1	SOLENOID SWITCH 120V	SOLENOID001
1	SOLENOID SWITCH 240V	SOLENOID002
1	SOLENOID SWITCH 240V	SOLENOID002
1	SOLENOID SWITCH 440V	SOLENOID003
1	SOLENOID SWITCH 575V	SOLENOID004

No	Qty	DESCRIPTION	# MANARAS	REV
1	3	6-32 X 3/8 TYPE T S-TAP SCREW	SCREW094	
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	SCREW054	
5	6	1/4-20 HEX NUT ZP	NUT008	
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)	LEVER085	
12	1	BRAKE PLATE ANTI-VIBRATION	PLATE087	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



Manaras
Opera

PART DESCRIPTION
OTBH-A DRUM BRAKE

PART NUMBER
BRAKE015X

MANARAS-OPERA
136 ONEIDA DRIVE
POINTE-CLAIRE, QC, H9R 1A8
TEL: 1-800-381-2260
FAX: 1-888-626-0606

DRAWN DATE:
2014.05.15

LAST UPDATE:
INITIAL

DRAWN BY:
L.F. MARCEAU

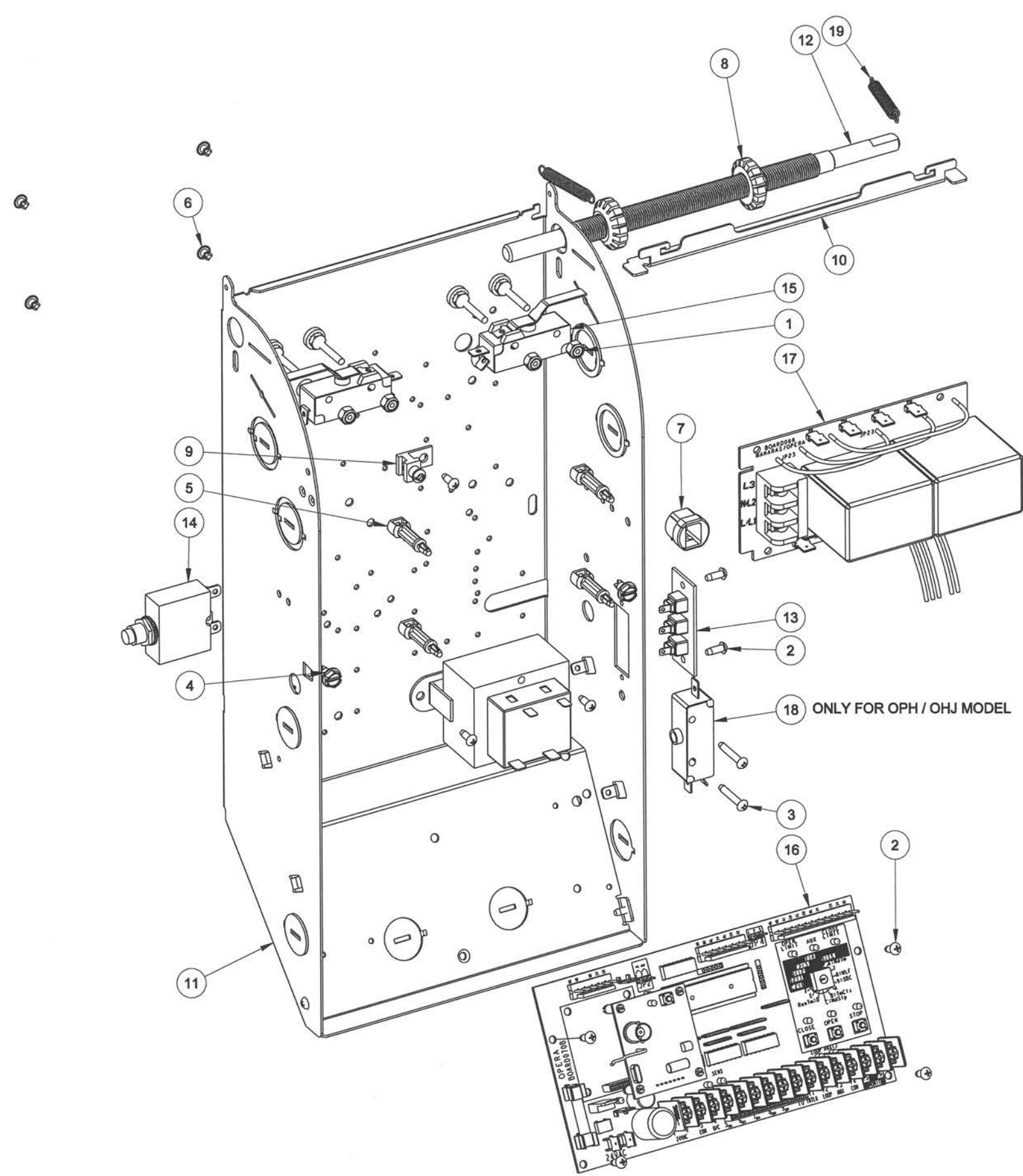
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TRANSFORMER TABLE			
	Qty	DESCRIPTION	# MANARAS
120V - 1PH	1	TRANSFO 120/240V-24V 40VA	TRANSF143
230V - 1PH	1	TRANSFO 120/240V-24V 40VA	TRANSF143
208V - 3PH	1	TRANSFO 240V/208V-24V 40VA	TRANSF037
480V - 3PH	1	TRANSFO 480V-24V 40VA	TRANSF088
575V - 3PH	1	TRANSFO 575V-24V 40VA	TRANSF142

HARNESS		
Qty	DESCRIPTION	# MANARAS
1	MOTOR HARNESS 1 PHASE	HARNESS031
1	MOTOR HARNESS 3 PHASE	HARNESS032
1	CONTROL HARNESS (INSIDE CBOX)	HARNESS099

No	Qty	DESCRIPTION	# MANARAS	REV
1	4	6-32 HEX NYLON LOCK NUT ZP	NUT018	
2	9	6-32 X 3/8 TYPE T S-TAP. SCREW	SCREW094	
3	2	6-32 X 7/8 TYPE F S-TAP. SCREW	SCREW096	
4	2	10-24 X 3/8 TYPE T S-TAP. SCREW	SCREW022	
5	4	BOARD SUPPORT 1 IN.	SUPPORT008	
6	4	BOARD SUPPORT RIVET	SUPPORT002	
7	1	CABLE STRAIN RELIEF 5/8 OD	BUSHING058	
8	2	CAM LIMIT OPERA	CAM011	2
9	1	GROUND LUG TA61G-UL	CONNECTOR039	
10	1	OPERA CBOX CAMPLATE	CAMPLATE019	5
11	1	OPERA CONTROL BOX	CBOX04x	—
12	1	OPERA LIMIT SHAFT	SHAFT103	6
13	1	RADIO CONTROL TERM STRIP	TSTRIP005	
14	1	RESET	SEE MOTOR TABLE	
15	2	SINGLE LIMIT SWITCH - LEVER 46 DEG	LIMIT023	4
16	1	STD ELECT. CONTR. BOARD	BOARD070	
17	1	STD ELECT. POWER BOARD 2 RELAYS	BOARD066	
18	1	STD SINGLE CUT-OFF SWITCH	LIMIT020	
19	2	TOGGLE SWITCH SPRING	SPRING030	
20	1	TRANSFO TO 24V	SEE TABLE	—



PART DESCRIPTION	
OPERA CBOX ECB	
PART NUMBER	MANARAS-OPERA
OPERA-BOARD070	138 ONEIDA DRIVE
DRAWN BY: J. PROULX	POINTE-CLAIRE, QC, H9R 1A8
DATE: 2010-09-23	TEL: 1-800-381-2260
UPDATED BY: J. PROULX	FAX: 1-888-626-0606
DATE: 2014-02-03	



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