

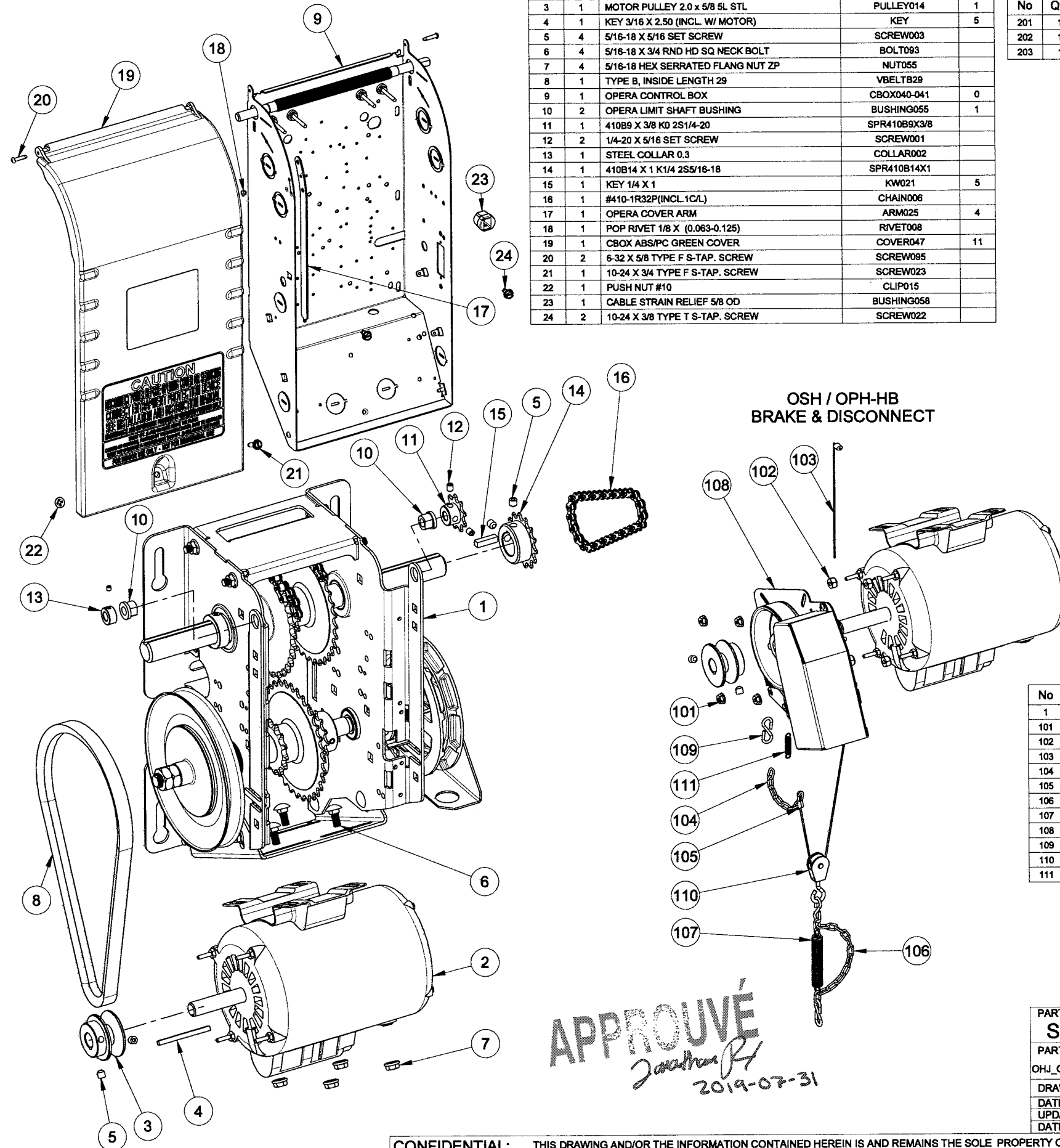
V-PH	HP	DESCRIPTION	# MANARAS
120V - 1PH	1/2HP	MOTOR 1/2HP - 120V/230V - 1PH	MOTOR254
		1PH - 10 AMPS RESET	RESET007
	3/4HP	MOTOR 3/4HP - 120V/230V - 1PH	MOTOR255
240V - 1PH	1HP	MOTOR 1HP - 120V/230V - 1PH	MOTOR256
		1PH - 15 AMPS RESET	RESET012
		1PH - 17 AMPS RESET	RESET014
208V - 3PH	1/2HP	MOTOR 1/2HP - 120V/230V - 1PH	MOTOR254
		1PH - 5 AMPS RESET	RESET002
	3/4HP	MOTOR 3/4HP - 120V/230V - 1PH	MOTOR255
460V - 3PH	1HP	MOTOR 1HP - 120V/230V - 1PH	MOTOR256
		1PH - 7 AMPS RESET	RESET004
		1PH - 9 AMPS RESET	RESET006
600V - 3PH	1/2HP	MOTOR 1/2HP - 208V/460V - 3PH	MOTOR271
		3PH - 5 AMPS RESET	MOTOR273
	1HP	MOTOR 1HP - 208V/460V - 3PH	MOTOR275
120V - 1PH	1/2HP	MOTOR 1/2HP - 208V/460V - 3PH	MOTOR271
		3PH - 5 AMPS RESET	MOTOR273
	1HP	MOTOR 1HP - 208V/460V - 3PH	MOTOR275
240V - 1PH	1/2HP	MOTOR 1/2HP - 208V/460V - 3PH	MOTOR271
		3PH - 5 AMPS RESET	MOTOR273
	1HP	MOTOR 1HP - 208V/460V - 3PH	MOTOR275
600V - 3PH	1/2HP	MOTOR 1/2HP - 575V - 3PH	MOTOR272
		3PH - 5 AMPS RESET	MOTOR274
	1HP	MOTOR 1HP - 575V - 3PH	MOTOR276

MOTOR HARNESS	
DESCRIPTION	# MANARAS
MOTOR HARNESS ECB 1 PHASE	HARNESS031
MOTOR HARNESS ECB 3 PHASE	HARNESS032
MOTOR HARNESS HW 1 PHASE	HARNESS043
MOTOR HARNESS HW 3 PHASE	HARNESS044

OPH HARDWARE		
Qty	DESCRIPTION	# MANARAS
1	H. CHAIN FOR 14' DOOR SHAFT HEIGHT	J114
1	CHAIN KEEPER FOR HAND CHAIN	CHAINKEEPER001
1	HARDWARE BAG #1	HD1-HBAG

OPJ HARDWARE		
Qty	DESCRIPTION	# MANARAS
1	14' DISC. CHAIN KIT	CHAINKIT001
1	CHAIN KEEPER FOR DISC. CHAIN	CHAINKEEPER002
1	DISCONNECT HANDLE	HANDLE007
1	HARDWARE BAG #1	HD1-HBAG

OSH / OHJ / OPH-HB HARDWARE		
Qty	DESCRIPTION	# MANARAS
1	H. CHAIN FOR 14' DOOR SHAFT HEIGHT	J114
1	14' DISC. CHAIN KIT	CHAINKIT001
1	CHAIN KEEPER FOR HAND CHAIN	CHAINKEEPER001
1	CHAIN KEEPER FOR DISC. CHAIN	CHAINKEEPER002
1	DISCONNECT HANDLE	HANDLE007
1	HARDWARE BAG #1	HD1-HBAG



No	Qty	DESCRIPTION	# MANARAS	REV
1	1	SUB ASSY FRAME	FRAME	
2	1	MOTOR	SEE TABLE	
3	1	MOTOR PULLEY 2.0 x 5/8 5L STL	PULLEY014	1
4	1	KEY 3/16 X 2.50 (INCL. W/ MOTOR)	KEY	5
5	4	5/16-18 X 5/16 SET SCREW	SCREW003	
6	4	5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
7	4	5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
8	1	TYPE B, INSIDE LENGTH 29	VBELTB29	
9	1	OPERA CONTROL BOX	CBOX040-041	0
10	2	OPERA LIMIT SHAFT BUSHING	BUSHING055	1
11	1	410B9 X 3/8 K0 2S1/4-20	SPR410B9X3/8	
12	2	1/4-20 X 5/16 SET SCREW	SCREW001	
13	1	STEEL COLLAR 0.3	COLLAR002	
14	1	410B14 X 1 K1/4 2SS/16-18	SPR410B14X1	
15	1	KEY 1/4 X 1	KW021	5
16	1	#410-1R32P(INCL.1C/L)	CHAIN006	
17	1	OPERA COVER ARM	ARM025	4
18	1	POP RIVET 1/8 X (0.063-0.125)	RIVET008	
19	1	CBOX ABS/PC GREEN COVER	COVER047	11
20	2	6-32 X 5/8 TYPE F S-TAP. SCREW	SCREW095	
21	1	10-24 X 3/4 TYPE F S-TAP. SCREW	SCREW023	
22	1	PUSH NUT #10	CLIP015	
23	1	CABLE STRAIN RELIEF 5/8 OD	BUSHING058	
24	2	10-24 X 3/8 TYPE T S-TAP. SCREW	SCREW022	

OPJ DISCONNECT				
No	Qty	DESCRIPTION	# MANARAS	REV
201	1	7X7 1/16" X 16"	CABLE012	
202	1	CABLE SLEEVE 1/16"	SLEEVE001	
203	1	S HOOK	HOOK001	

HARNESS		
Qty	DESCRIPTION	# MANARAS
1	BRAKE HARNESS	HARNESS053

No	Qty	DESCRIPTION	# MANARAS	REV
1	1	KEY 3/16 X 2.50 (INCL. W/ MOTOR)	KEY	5
101	4	10-32 HEX SERRATED FLANG NUT ZP	NUT062	
102	4	1/4-20 HEX NYLON LOCK NUT ZP	NUT020	
103	1	7X7 1/16" X 33"	CABLE026	
104	1	BRAKE RELEASE CHAIN 4" - 8 LINKS	CHAIN084	
105	1	CABLE SLEEVE 1/16"	SLEEVE001	
106	1	DISCONNECT CHAIN 5" LONG	CHAIN082	
107	1	EXTENSION SPRING E480-063-3275	SPRING027	
108	1	OSH BAND BRAKE ASSEMBLY KIT	BRAKE013 (DRAWING021)	
109	3	S HOOK	HOOK001	
110	1	SINGLE SWIVEL PULLEY 1.0	PULLEY018	
111	1	TOGGLE SWITCH SPRING	SPRING030	0

PART DESCRIPTION EXAMPLE TABLE				
V-PH	HP	SIDE	CONTROL	PART DESCRIPTION
120V-1PH	1/2HP	HR	ECB	120V-1PH-1/2HP-HR ECB
600V-3PH	1HP	N/A	MONIT	600V-3PH-1HP MONIT
208V-3PH	3/4HP	HL	HW	208V-3PH-3/4HP HL HW
...

PART DESCRIPTION	
SEE PART DESCRIPTION EXAMPLE TABLE	
PART NUMBER	MANARAS-OPERA
OHJ_OPH_OPH-HB_OPJ_OSH	136 ONEIDA DRIVE
DRAWN BY: J. PROULX	POINTE-CLAIRE, QC, H9R 1A8
DATE: 2012-01-09	TEL: 1-800-361-2260
UPDATED BY: J. PROULX	FAX: 1-888-626-0606
DATE: 2019-07-31	

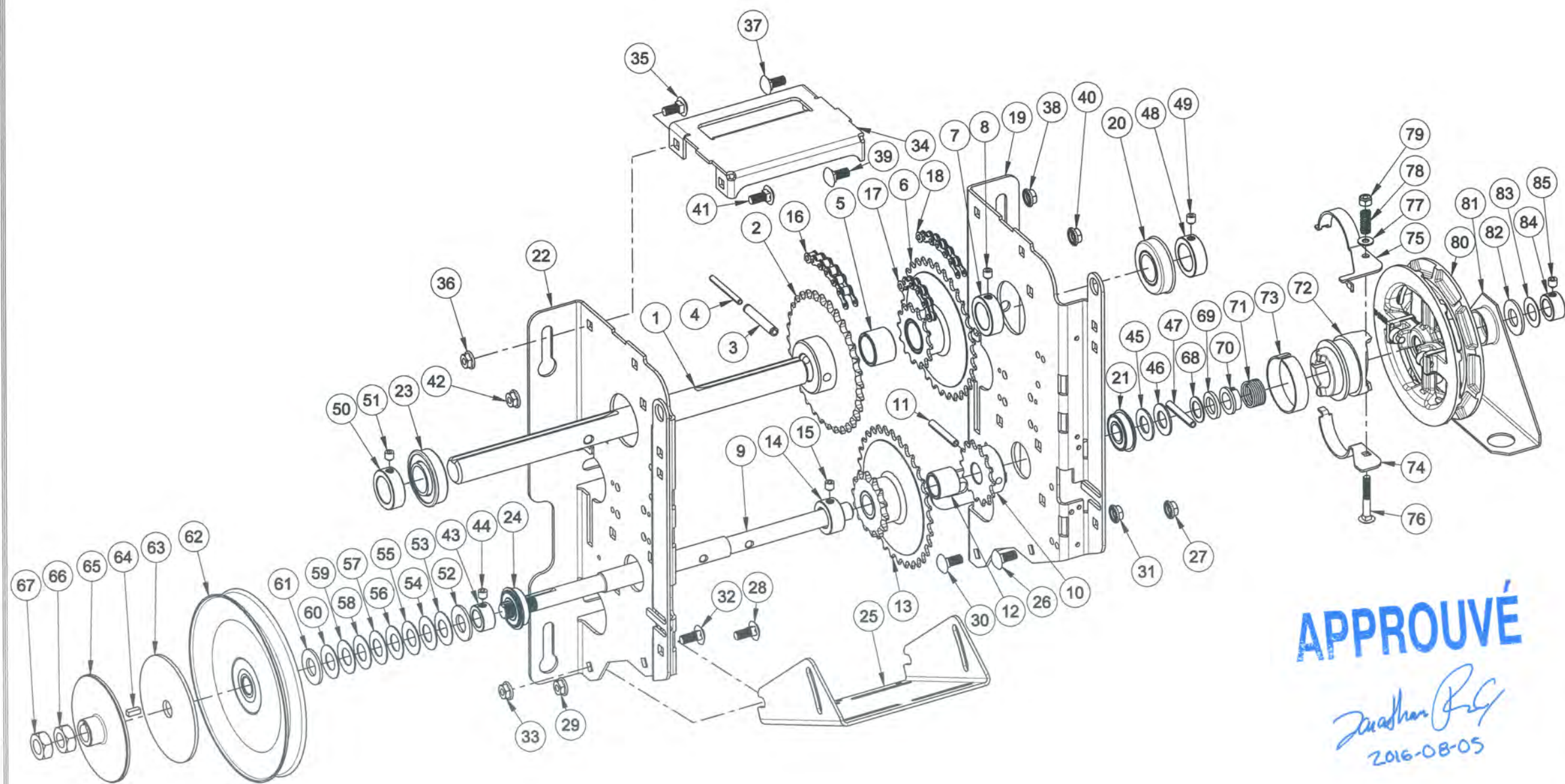


SHEET: 1 of 1

CONFIDENTIAL: THIS DRAWING AND/OR THE INFORMATION CONTAINED HEREIN IS AND REMAINS THE SOLE PROPERTY OF, AND IS PROPRIETARY TO, MANARAS-OPERA. THIS DRAWING AND/OR INFORMATION SHALL BE KEPT CONFIDENTIAL AND MAY NOT BE REPRODUCED, COPIED, MODIFIED, DISCLOSED, TRANSFERRED, OR MADE AVAILABLE TO OTHERS, EXCEPT WITH THE EXPRESS CONSENT OF MANARAS-OPERA. IT IS LOANED IN CONFIDENCE FOR MUTUAL ASSISTANCE PURPOSES ONLY. MANARAS-OPERA MAY AT ANY TIME, WRITTEN MODIFY THE DRAWING AND/OR INFORMATION CONTAINED HEREIN.

71	OPERA - DISCONNECT SPRING	SPRING040	3
72	SYNTHETIC DISCONNECT CAM OPERA	CAM017	0
73	OPERA DISCONNECT FRICTION BAND	SHOE011	
74	DISCONNECT SWITCH SHOE A	SHOE009	5
75	DISCONNECT SWITCH SHOE	SHOE010	2
76	1/4-20 X 1-3/4 RND HD SQ NECK BOLT	BOLT094	
77	TYPE A PLAIN WASHER 3/16 ZP	WASHER003	0
78	CAM GUIDE PLATE SPRING C260047	SPRING001	
79	1/4-20 HEX NYLON LOCK NUT ZP	NUT020	
80	PW ASSEMBLY (ROLLERS AND CLIPS)	POCKETWHEEL007	
81	CHAIN GUIDE OPERA	GUIDE014	3
82	TYPE A PLAIN WASHER 5/8 N ZP	WASHER014	0
83	FDGHE FW 5/8ID X 11/8 TRA1018	BEARING024	
84	COLLAR 5/8"	COLLAR004	
85	5/16-18 X 5/16 SET SCREW	SCREW003	

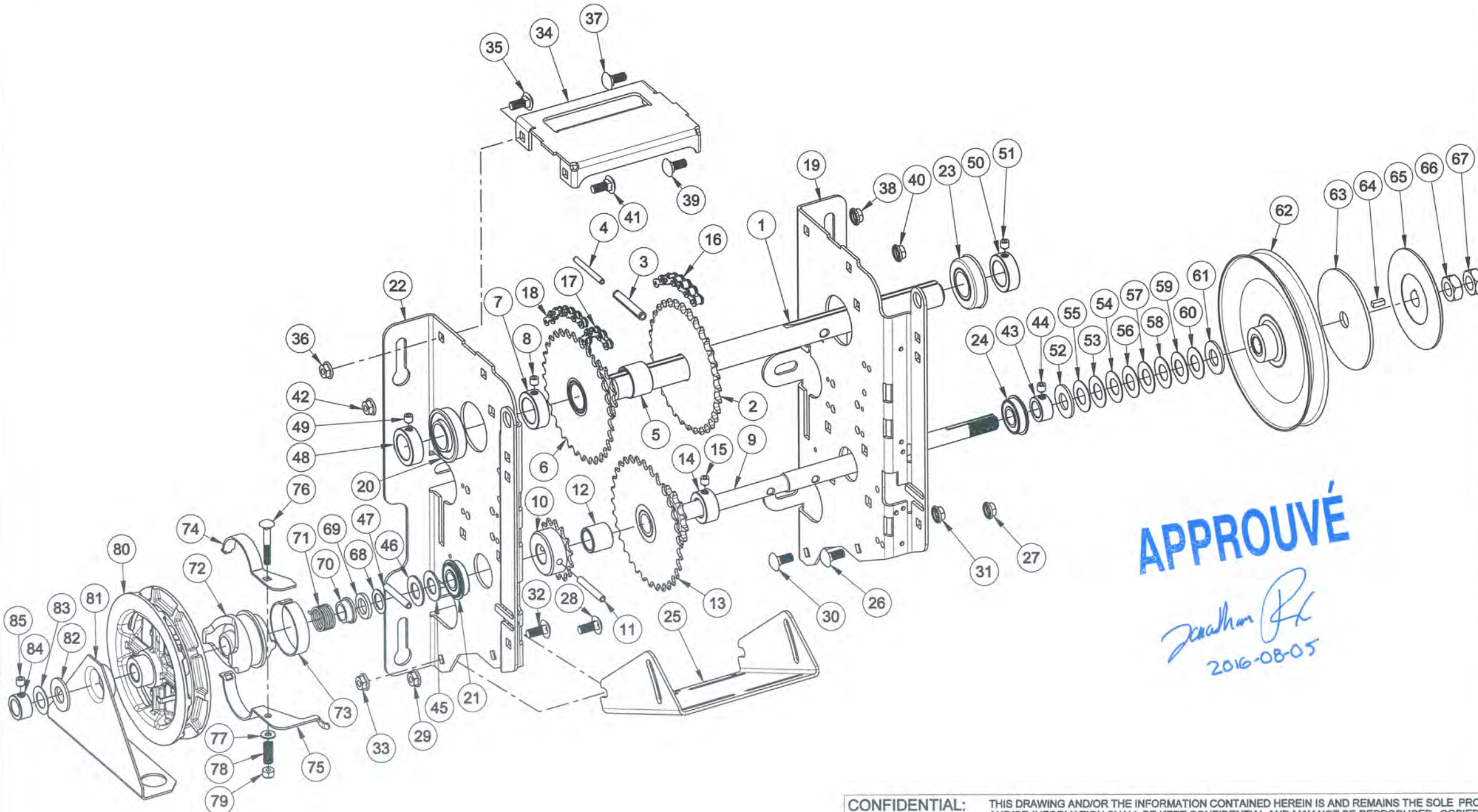
No	Qty	DESCRIPTION	# MANARAS	REV
1		OPERA OUTPUT SHAFT	SHAFT102	5
2		41B32 X 1 K0 0S PH5/16	SPR41B32X1P5/16	
3		PIN SLOTTED SPRING 5/16 X 2	PIN021	
4		PIN SLOTTED SPRING 4.5X50MM HD	PIN028	
5		OPERA SPACER 1"	SPACER009	1
6		410B14A32 X 1 K0 0S	SPR410B14A32X1	
7		COLLAR 1"	COLLAR007	
8		5/16-18 X 5/16 SET SCREW	SCREW003	
9		INPUT SHAFT OPERA-H	SHAFT104	10
10		410B14 X 3/4 K0 0S PH1/4	SPR410B14X3/4	3
11		PIN SLOTTED SPRING 1/4 X 1-3/4	PIN020	
12		OPERA SPACER 3/4"	SPACER008	1
13		41B14_410A32 X 3/4 K0 0S	SPR41B14_410A32X3/4	
14		COLLAR 3/4"	COLLAR005	
15		5/16-18 X 5/16 SET SCREW	SCREW003	
16		#41-1R48P(INCL.1C/L)	CHAIN059	
17		#410-1R48P(INCL.1C/L)	CHAIN058	
18		#410-1R48P(INCL.1C/L)	CHAIN058	
19		RIGHT HAND SIDE FOR OPERA	FRAME037	24
20		FLANGE BEARING 1" C16-3F*5	BEARING007	
21		FLANGED BEARING 5/8	BEARING006	
22		LEFT HAND SIDE FOR OPERA	FRAME038	24
23		FLANGE BEARING 1" C16-3F*5	BEARING007	
24		FLANGED BEARING 5/8	BEARING006	
25		OPERA MOTOR PLATE	PLATE078	10
26		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
27		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
28		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
29		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
30		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
31		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
32		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
33		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
34		OPERA HANDLE	HANDLE005	9
35		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
36		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
37		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
38		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
39		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
40		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
41		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
42		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
43		COLLAR 5/8"	COLLAR004	
44		5/16-18 X 5/16 SET SCREW	SCREW003	
45		FLT WASHER 5/8 (.640X1.18X.065) ZP	WASHER043	0
46		FLT WASHER 5/8 (.640X1.18X.065) ZP	WASHER043	0
47		PIN SLOTTED SPRING 1/4 X 1-3/4	PIN020	
48		COLLAR 1"	COLLAR007	
49		5/16-18 X 5/16 SET SCREW	SCREW003	
50		COLLAR 1"	COLLAR007	
51		5/16-18 X 5/16 SET SCREW	SCREW003	
52		TYPE A PLAIN WASHER 5/8 N ZP	WASHER014	0
53		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
54		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
55		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
56		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
57		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
58		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
59		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
60		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
61		TYPE A PLAIN WASHER 5/8 N ZP	WASHER014	0
62		PULLEY 7" x 5/8" 5/L/B	PULLEY020	5
63		CLPAD 5/8x4x0.125"	CLUTCHPAD005	3
64		KEY 3/16 X 1/2	KW031	5
65		OPERA CLUTCHPLATE	CLUTCHPLATE006	3
66		5/8-18 HEX JAM NUT ZP	NUT013	
67		5/8-18 HEX JAM NUT ZP	NUT013	
68		FLT WASHER 5/8 (.630X.955X.047) ZP	WASHER018	0
69		OILITE WASHER (.625X1.00X.125)	WASHER057	0
70		OPERA DISCONNECT SPRING BUSHING	BUSHING056	2



PART DESCRIPTION		SUB ASSY FRAME OPH RIGHT HAND	
PART NUMBER		OPHFRAMEHR	
DRAWN BY: J. PROULX		MANARAS-OPERA 136 ONEIDA DRIVE POINTE-CLAIRE, QC, H9R 1A8 TEL: 1-800-361-2260 FAX: 1-888-626-0606	
DATE: 2011-10-11			
UPDATED BY: O.BOTEZATU			
DATE: 2016.08.03		SHEET: 1 of 1	

CONFIDENTIAL: THIS DRAWING AND/OR THE INFORMATION CONTAINED HEREIN IS AND REMAINS THE SOLE PROPERTY OF, AND IS PROPRIETARY TO, MANARAS-OPERA. THIS DRAWING AND/OR INFORMATION SHALL BE KEPT CONFIDENTIAL AND MAY NOT BE REPRODUCED, COPIED, MODIFIED, DISCLOSED, TRANSFERRED, OR MADE AVAILABLE TO OTHERS, EXCEPT WITH THE EXPRESS CONSENT OF MANARAS-OPERA. IT IS LOANED IN CONFIDENCE FOR MUTUAL ASSISTANCE PURPOSES ONLY. MANARAS-OPERA MAY AT ANY TIME, WRITTEN MODIFY THE DRAWING AND/OR INFORMATION CONTAINED HEREIN.

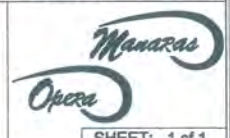
No	Qty	DESCRIPTION	# MANARAS	REV
71		OPERA - DISCONNECT SPRING	SPRING040	3
72		SYNTHETIC DISCONNECT CAM OPERA	CAM017	0
73		OPERA DISCONNECT FRICTION BAND	SHOE011	
74		DISCONNECT SWITCH SHOE A	SHOE009	5
75		DISCONNECT SWITCH SHOE	SHOE010	2
76		1/4-20 X 1-3/4 RND HD SQ NECK BOLT	BOLT094	
77		TYPE A PLAIN WASHER 3/16 ZP	WASHER003	0
78		CAM GUIDE PLATE SPRING C260047	SPRING001	
79		1/4-20 HEX NYLON LOCK NUT ZP	NUT020	
80		PW ASSEMBLY (ROLLERS AND CLIPS)	POCKETWHEEL007	
81		CHAIN GUIDE OPERA	GUIDE014	3
82		TYPE A PLAIN WASHER 5/8 N ZP	WASHER014	0
83		FDGHE FW 5/8ID X 11/8 TRA1018	BEARING024	
84		COLLAR 5/8"	COLLAR004	
85		5/16-18 X 5/16 SET SCREW	SCREW003	



APPROUVÉ
Jeathan Pk
 2016-08-05

No	Qty	DESCRIPTION	# MANARAS	REV
1		OPERA OUTPUT SHAFT	SHAFT102	5
2		41B32 X 1 K0 0S PH5/16	SPR41B32X1P5/16	
3		PIN SLOTTED SPRING 5/16 X 2	PIN021	
4		PIN SLOTTED SPRING 4.5X50MM HD	PIN028	
5		OPERA SPACER 1"	SPACER009	1
6		410B14A32 X 1 K0 0S	SPR410B14A32X1	
7		COLLAR 1"	COLLAR007	
8		5/16-18 X 5/16 SET SCREW	SCREW003	
9		INPUT SHAFT OPERA-H	SHAFT104	10
10		410B14 X 3/4 K0 0S PH1/4	SPR410B14X3/4	3
11		PIN SLOTTED SPRING 1/4 X 1-3/4	PIN020	
12		OPERA SPACER 3/4"	SPACER008	1
13		41B14_410A32 X 3/4 K0 0S	SPR41B14_410A32X3/4	
14		COLLAR 3/4"	COLLAR005	
15		5/16-18 X 5/16 SET SCREW	SCREW003	
16		#41-1R48P(INCL.1C/L)	CHAIN059	
17		#410-1R48P(INCL.1C/L)	CHAIN058	
18		#410-1R48P(INCL.1C/L)	CHAIN058	
19		RIGHT HAND SIDE FOR OPERA	FRAME037	24
20		FLANGE BEARING 1" C16-3F*5	BEARING007	
21		FLANGED BEARING 5/8	BEARING006	
22		LEFT HAND SIDE FOR OPERA	FRAME038	24
23		FLANGE BEARING 1" C16-3F*5	BEARING007	
24		FLANGED BEARING 5/8	BEARING006	
25		OPERA MOTOR PLATE	PLATE078	10
26		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
27		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
28		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
29		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
30		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
31		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
32		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
33		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
34		OPERA HANDLE	HANDLE005	9
35		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
36		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
37		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
38		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
39		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
40		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
41		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
42		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
43		COLLAR 5/8"	COLLAR004	
44		5/16-18 X 5/16 SET SCREW	SCREW003	
45		FLT WASHER 5/8 (.640X1.18X.065) ZP	WASHER043	0
46		FLT WASHER 5/8 (.640X1.18X.065) ZP	WASHER043	0
47		PIN SLOTTED SPRING 1/4 X 1-3/4	PIN020	
48		COLLAR 1"	COLLAR007	
49		5/16-18 X 5/16 SET SCREW	SCREW003	
50		COLLAR 1"	COLLAR007	
51		5/16-18 X 5/16 SET SCREW	SCREW003	
52		TYPE A PLAIN WASHER 5/8 N ZP	WASHER014	0
53		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
54		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
55		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
56		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
57		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
58		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
59		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
60		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
61		TYPE A PLAIN WASHER 5/8 N ZP	WASHER014	0
62		PULLEY 7" x 5/8" 5L/B	PULLEY020	5
63		CL_PAD 5/8x4x0.125"	CLUTCHPAD005	3
64		KEY 3/16 X 1/2	KW031	5
65		OPERA CLUTCHPLATE	CLUTCHPLATE006	3
66		5/8-18 HEX JAM NUT ZP	NUT013	
67		5/8-18 HEX JAM NUT ZP	NUT013	
68		FLT WASHER 5/8 (.630X.955X.047) ZP	WASHER018	0
69		OILLITE WASHER (.625X1.00X.125)	WASHER057	0
70		OPERA DISCONNECT SPRING BUSHING	BUSHING056	2

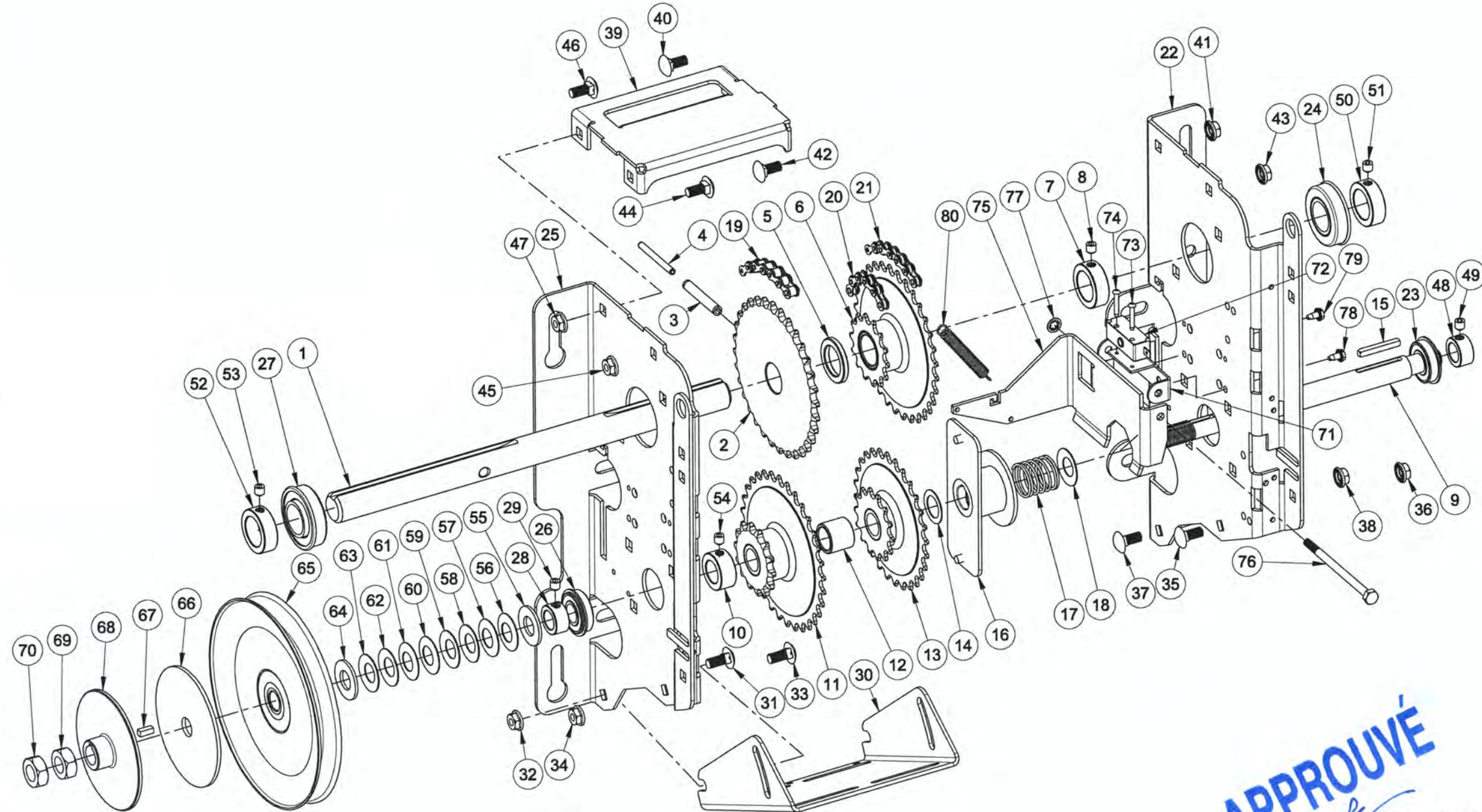
PART DESCRIPTION	
SUB ASSY FRAME OPH LEFT HAND	
PART NUMBER	OPHFRAMEHL
MANARAS-OPERA	136 ONEIDA DRIVE
POINTE-CLAIRE, QC, H9R 1A8	TEL: 1-800-361-2280
DATE: 2012-03-01	FAX: 1-888-626-0606
UPDATED BY: O.BOTEZATU	
DATE: 2016.08.03	



SHEET: 1 of 1

CONFIDENTIAL: THIS DRAWING AND/OR THE INFORMATION CONTAINED HEREIN IS AND REMAINS THE SOLE PROPERTY OF, AND IS PROPRIETARY TO, MANARAS-OPERA. THIS DRAWING AND/OR INFORMATION SHALL BE KEPT CONFIDENTIAL AND MAY NOT BE REPRODUCED, COPIED, MODIFIED, DISCLOSED, TRANSFERRED, OR MADE AVAILABLE TO OTHERS, EXCEPT WITH THE EXPRESS CONSENT OF MANARAS-OPERA. IT IS LOANED IN CONFIDENCE FOR MUTUAL ASSISTANCE PURPOSES ONLY. MANARAS-OPERA MAY AT ANY TIME, WRITTEN MODIFY THE DRAWING AND/OR INFORMATION CONTAINED HEREIN.

No	Qty	DESCRIPTION	# MANARAS	REV
71		FORK / SWITCH SUPPORT	BRACKET192	1
72		STD SINGLE CUT-OFF SWITCH	LIMIT020	
73		6-32 X 7/8 TYPE F S-TAP. SCREW	SCREW096	
74		6-32 X 7/8 TYPE F S-TAP. SCREW	SCREW096	
75		DISCONNECT FORK RH	FORK001	6
76		1/4-20 X 4 HEX BOLT	BOLT016	
77		PUSH NUT 1/4"	CLIP029	
78		10-24 X 3/8 TYPE T S-TAP. SCREW	SCREW022	
79		10-24 X 3/8 TYPE T S-TAP. SCREW	SCREW022	
80		EXT. SPRING 3/8 OD	SPRING042	



No	Qty	DESCRIPTION	# MANARAS	REV
1		OPERA OUTPUT SHAFT	SHAFT102	5
2		41B32 X 1 K0 0S PH5/16	SPR41B32X1P5/16	
3		PIN SLOTTED SPRING 5/16 X 2	PIN021	
4		PIN SLOTTED SPRING 4.5X50MM HD	PIN028	
5		OPERA-MJ SPACER 3/16 X 1"	SPACER013	
6		410B14A32 X 1 K0 0S	SPR410B14A32X1	
7		COLLAR 1"	COLLAR007	
8		5/16-18 X 5/16 SET SCREW	SCREW003	
9		INPUT SHAFT OPJ	SHAFT107	2
10		COLLAR 3/4"	COLLAR005	
11		41B14_410A32 X 3/4 K0 0S	SPR41B14_410A32X3/4	
12		OPERA SPACER 3/4"	SPACER008	1
13		410B14A28 X 3/4 K0 0S	SPR410B14A28X3/4	
14		SHIM WASHER (.750X1.125X.031) ZP	WASHER058	0
15		KEY 3/16 X 1-1/2 ROUNDED ENDS	KW013	5
16		COUPLING 3/4 2 PINS 1/4	COUPLING014	3
17		COMP. SPRING 1"ID 2"L	SPRING041	
18		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
19		#41-1R48P(INCL.1C/L)	CHAIN059	
20		#410-1R48P(INCL.1C/L)	CHAIN058	
21		#410-1R48P(INCL.1C/L)	CHAIN058	
22		RIGHT HAND SIDE FOR OPERA	FRAME037	24
23		FLANGED PRECISION BEARING ID 5/8"	BEARING006	
24		FLANGED BEARING ID 1"	BEARING007	
25		LEFT HAND SIDE FOR OPERA	FRAME038	24
26		FLANGED PRECISION BEARING ID 5/8"	BEARING006	
27		FLANGED BEARING ID 1"	BEARING007	
28		COLLAR 5/8"	COLLAR004	
29		5/16-18 X 5/16 SET SCREW	SCREW003	
30		OPERA MOTOR PLATE	PLATE078	10
31		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
32		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
33		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
34		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
35		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
36		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
37		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
38		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
39		OPERA HANDLE	HANDLE005	9
40		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
41		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
42		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
43		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
44		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
45		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
46		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
47		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
48		COLLAR 5/8"	COLLAR004	
49		5/16-18 X 5/16 SET SCREW	SCREW003	
50		COLLAR 1"	COLLAR007	
51		5/16-18 X 5/16 SET SCREW	SCREW003	
52		COLLAR 1"	COLLAR007	
53		5/16-18 X 5/16 SET SCREW	SCREW003	
54		5/16-18 X 5/16 SET SCREW	SCREW003	
55		TYPE A PLAIN WASHER 5/8 N ZP	WASHER014	0
56		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
57		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
58		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
59		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
60		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
61		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
62		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
63		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
64		TYPE A PLAIN WASHER 5/8 N ZP	WASHER014	0
65		PULLEY 7" x 5/8" 5L/B	PULLEY020	6
66		CL.PAD 5/8x4x0.125"	CLUTCHPAD005	3
67		KEY 3/16 X 1/2	KW031	5
68		OPERA CLUTCHPLATE	CLUTCHPLATE006	3
69		5/8-18 HEX JAM NUT ZP	NUT013	
70		5/8-18 HEX JAM NUT ZP	NUT013	

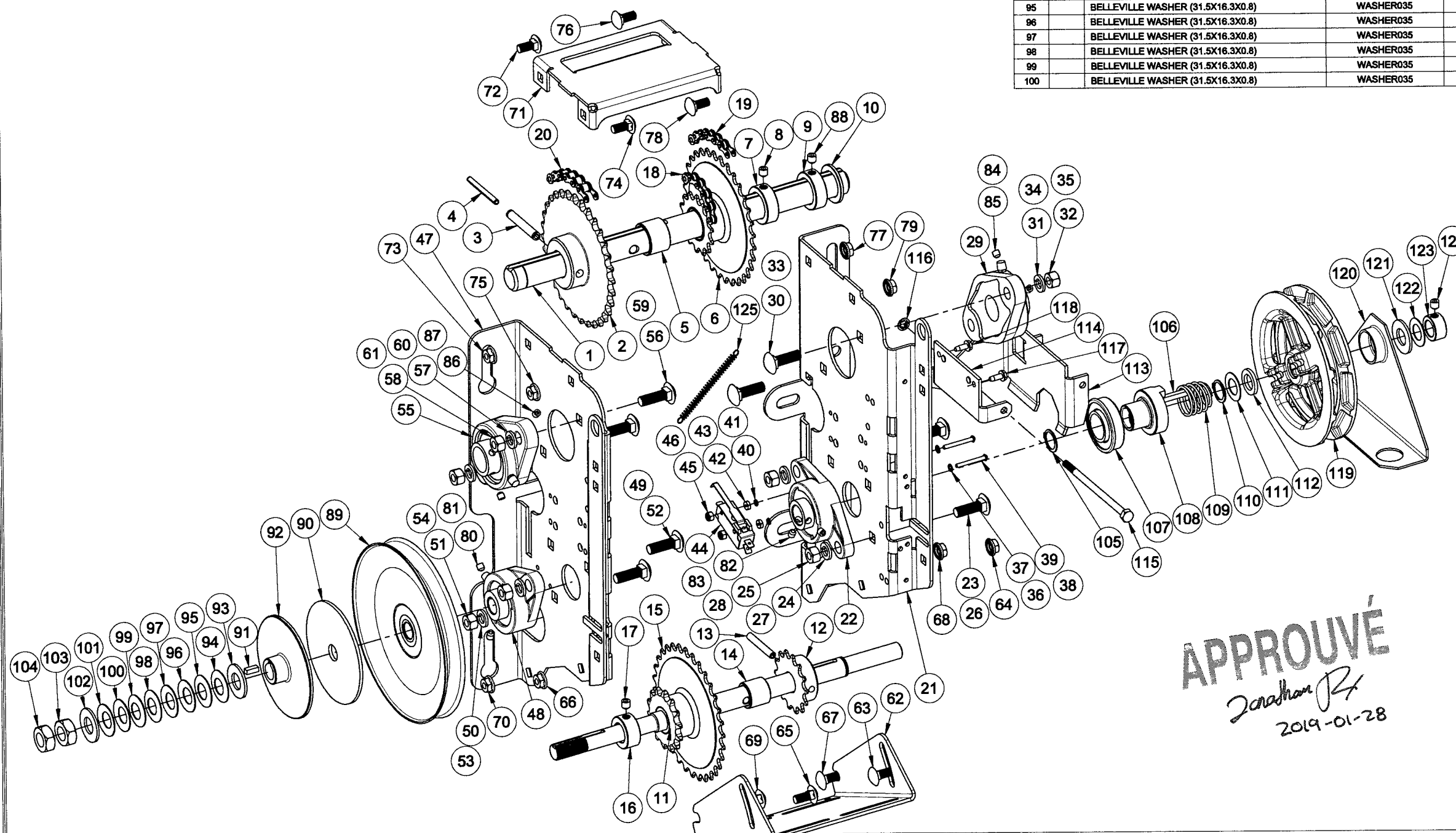
APPROUVÉ
[Signature] 2019.04.04

PART DESCRIPTION	
SUB ASSY FRAME OPJ	
PART NUMBER	OPJFRAME
MANARAS-OPERA	136 ONEIDA DRIVE
POINTE-CLAIRE, QC, H9R 1A8	TEL: 1-800-361-2260
DATE: 2012-03-05	FAX: 1-888-626-0606
UPDATED BY: L.F. MARCEAU	
DATE: 2019.04.04	



CONFIDENTIAL: THIS DRAWING AND/OR THE INFORMATION CONTAINED HEREIN IS AND REMAINS THE SOLE PROPERTY OF, AND IS PROPRIETARY TO, MANARAS-OPERA. THIS DRAWING AND/OR INFORMATION SHALL BE KEPT CONFIDENTIAL AND MAY NOT BE REPRODUCED, COPIED, MODIFIED, DISCLOSED, TRANSFERRED, OR MADE AVAILABLE TO OTHERS, EXCEPT WITH THE EXPRESS CONSENT OF MANARAS-OPERA. IT IS LOANED IN CONFIDENCE FOR MUTUAL ASSISTANCE PURPOSES ONLY. MANARAS-OPERA MAY AT ANY TIME, WRITTEN MODIFY THE DRAWING AND/OR INFORMATION CONTAINED HEREIN.

No	Qty	DESCRIPTION	# MANARAS	REV
123		COLLAR 5/8"	COLLAR004	
124		5/16-18 X 5/16 SET SCREW	SCREW003	
125		TOGGLE SWITCH SPRING	SPRING030	0
101		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	71
102		TYPE A PLAIN WASHER 5/8 N ZP	WASHER014	0
103		5/8-18 HEX JAM NUT ZP	NUT013	73
104		5/8-18 HEX JAM NUT ZP	NUT013	74
105		EXT. RETAINING RING	CLIP017	75
106		KEY 3/16 X 1-1/2 ROUNDED ENDS	KW013	5
107		FLANGED BEARING ID 1"	BEARING007	77
108		MANUAL HOIST COUPLING	COUPLING019	A
109		COMP. SPRING DISC. OSH	SPRING043	2
110		EXT. RETAINING RING	CLIP017	80
111		THRUST WASHER ID 5/8" OD 1-1/8"	BEARING024	81
112		OILLITE WASHER (.625X1.00X.125)	WASHER057	0
113		DISCONNECT FORK RH	FORK001	6
114		FORK PIVOT BRACKET	BRACKET201	1
115		1/4-20 X 4-1/2 HEX BOLT	BOLT109	85
116		PUSH NUT 1/4"	CLIP029	86
117		10-24 X 1/2 TYPE F S-TAP. SCREW	SCREW067	87
118		10-24 X 1/2 TYPE F S-TAP. SCREW	SCREW067	88
119		OPERA POCKETWHEEL	POCKETWHEEL005	2
120		CHAIN GUIDE OPERA	GUIDE014	3
121		TYPE A PLAIN WASHER 5/8 N ZP	WASHER014	0
122		THRUST WASHER ID 5/8" OD 1-1/8"	BEARING024	82
71		OPERA HANDLE	HANDLE005	9
72		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
73		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
74		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
75		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
76		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
77		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
78		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
79		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
80		1/4-28 X 1/4 SET SCREW	SCREW002	
81		1/4-28 X 1/4 SET SCREW	SCREW002	
82		1/4-28 X 1/4 SET SCREW	SCREW002	
83		1/4-28 X 1/4 SET SCREW	SCREW002	
84		1/4-28 X 1/4 SET SCREW	SCREW002	
85		1/4-28 X 1/4 SET SCREW	SCREW002	
86		1/4-28 X 1/4 SET SCREW	SCREW002	
87		1/4-28 X 1/4 SET SCREW	SCREW002	
88		5/16-18 X 5/16 SET SCREW	SCREW003	
89		PULLEY 7" x 5/8" 5L/8	PULLEY020	6
90		CL.PAD 5/8x4x0.125"	CLUTCHPAD005	3
91		KEY 3/16 X 1/2	KW031	5
92		OPERA CLUTCHPLATE	CLUTCHPLATE006	3
93		TYPE A PLAIN WASHER 5/8 N ZP	WASHER014	0
94		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
95		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
96		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
97		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
98		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
99		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
100		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	



APPROUVÉ
Jonathan Proulx
 2019-01-28

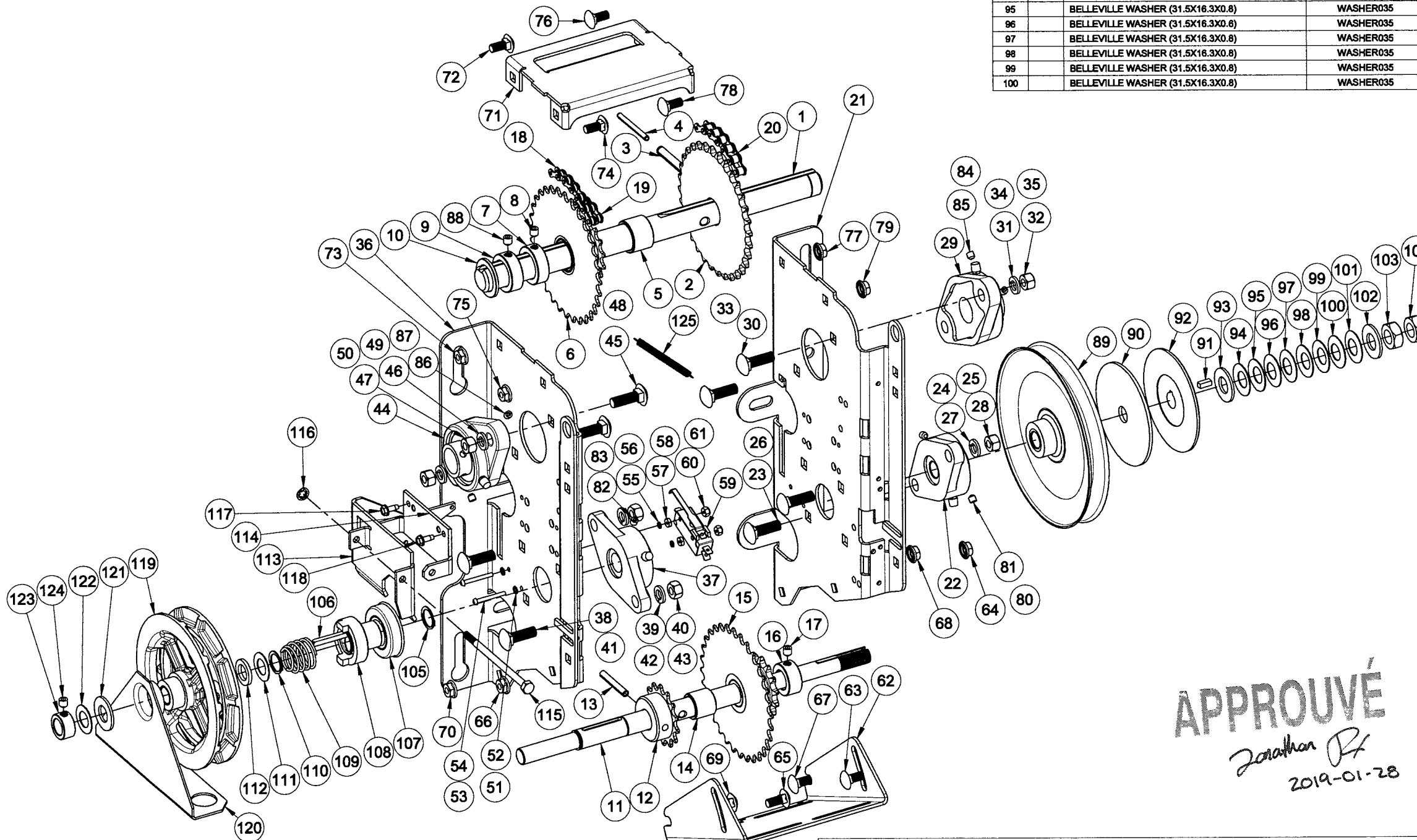
No	Qty	DESCRIPTION	# MANARAS	REV
1		OSH OUTPUT SHAFT	SHAFT117	1
2		41B32 X 1 K0 QS PH5/16	SPR41B32X1P5/16	
3		PIN SLOTTED SPRING 5/16 X 2	PIN021	
4		PIN SLOTTED SPRING 4.5X50MM HD	PIN028	
5		OPERA SPACER 1"	SPACER009	1
6		410B14A32 X 1 K0 QS	SPR410B14A32X1	
7		COLLAR 1"	COLLAR007	
8		5/16-18 X 5/16 SET SCREW	SCREW003	
9		COLLAR 1"	COLLAR007	
10		SPACER 1"ID X 1-1/2"OD X 0.125"	SPACER030	
11		OSH INPUT SHAFT	SHAFT116	6
12		410B14 X 3/4 K0 QS PH1/4	SPR410B14X3/4	3
13		PIN SLOTTED SPRING 1/4 X 1-3/4	PIN020	
14		OPERA SPACER 3/4"	SPACER008	1
15		41B14_410A32 X 3/4 K0 QS	SPR41B14_410A32X3/4	
16		COLLAR 3/4"	COLLAR005	
17		5/16-18 X 5/16 SET SCREW	SCREW003	
18		#410-1R48P(INCL.1CL)	CHAIN058	
19		#410-1R48P(INCL.1CL)	CHAIN058	
20		#41-1R48P(INCL.1CL)	CHAIN059	
21		RIGHT HAND SIDE FOR OPERA	FRAME037	24
22		2-BOLT FLANGE BEARING ID 3/4" BLACK	BEARING048	
23		3/8-16 X 1-1/4 RND HD SQ NECK BOLT	BOLT059	
24		HELICAL SPRING LOCK WASHER 3/8 ZP	WASHER030	
25		3/8-16 HEX NUT ZP	NUT010	
26		3/8-16 X 1-1/4 RND HD SQ NECK BOLT	BOLT059	
27		HELICAL SPRING LOCK WASHER 3/8 ZP	WASHER030	
28		3/8-16 HEX NUT ZP	NUT010	
29		2-BOLT FLANGE BEARING ID 1" BLACK	BEARING047	
30		3/8-16 X 1-1/4 RND HD SQ NECK BOLT	BOLT059	
31		HELICAL SPRING LOCK WASHER 3/8 ZP	WASHER030	
32		3/8-16 HEX NUT ZP	NUT010	
33		3/8-16 X 1-1/4 RND HD SQ NECK BOLT	BOLT059	
34		HELICAL SPRING LOCK WASHER 3/8 ZP	WASHER030	
35		3/8-16 HEX NUT ZP	NUT010	
36		INTERNAL TOOTH LOCKWASHER NO6 ZP	WASHER062	
37		INTERNAL TOOTH LOCKWASHER NO6 ZP	WASHER062	
38		6-32 X 1.25 MACHINE SCREW	SCREW109	
39		6-32 X 1.25 MACHINE SCREW	SCREW109	
40		HELICAL SPRING LOCK WASHER NO 6 ZP	WASHER023	
41		HELICAL SPRING LOCK WASHER NO 6 ZP	WASHER023	
42		6-32 HEX NUT ZP	NUT002	
43		6-32 HEX NUT ZP	NUT002	
44		SNAP-ACT. SW.SPDT-LEVER "END BEND"	LIMIT025B	0
45		6-32 HEX NYLON LOCK NUT ZP	NUT018	
46		6-32 HEX NYLON LOCK NUT ZP	NUT018	
47		LEFT HAND SIDE FOR OPERA	FRAME038	24
48		2-BOLT FLANGE BEARING ID 5/8" BLACK	BEARING051	
49		3/8-16 X 1-1/4 RND HD SQ NECK BOLT	BOLT059	
50		HELICAL SPRING LOCK WASHER 3/8 ZP	WASHER030	
51		3/8-16 HEX NUT ZP	NUT010	
52		3/8-16 X 1-1/4 RND HD SQ NECK BOLT	BOLT059	
53		HELICAL SPRING LOCK WASHER 3/8 ZP	WASHER030	
54		3/8-16 HEX NUT ZP	NUT010	
55		2-BOLT FLANGE BEARING ID 1" BLACK	BEARING047	
56		3/8-16 X 1-1/4 RND HD SQ NECK BOLT	BOLT059	
57		HELICAL SPRING LOCK WASHER 3/8 ZP	WASHER030	
58		3/8-16 HEX NUT ZP	NUT010	
59		3/8-16 X 1-1/4 RND HD SQ NECK BOLT	BOLT059	
60		HELICAL SPRING LOCK WASHER 3/8 ZP	WASHER030	
61		3/8-16 HEX NUT ZP	NUT010	
62		OPERA MOTOR PLATE	PLATE078	10
63		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
64		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
65		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
66		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
67		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
68		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
69		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
70		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	

PART DESCRIPTION		
SUB ASSY FRAME OSH RIGHT HAND		
PART NUMBER	MANARAS-OPERA	
OSHFRAMEHR	136 ONEIDA DRIVE	
DRAWN BY: J. PROULX	POINTE-CLAIRE, QC, H9R 1A8	
DATE: 2012-04-26	TEL: 1-800-361-2260	
UPDATED BY: J. Proulx	FAX: 1-888-626-0606	
DATE: 2019-01-28		



CONFIDENTIAL: THIS DRAWING AND/OR THE INFORMATION CONTAINED HEREIN IS AND REMAINS THE SOLE PROPERTY OF, AND IS PROPRIETARY TO, MANARAS-OPERA. THIS DRAWING AND/OR INFORMATION SHALL BE KEPT CONFIDENTIAL AND MAY NOT BE REPRODUCED, COPIED, MODIFIED, DISCLOSED, TRANSFERRED, OR MADE AVAILABLE TO OTHERS, EXCEPT WITH THE EXPRESS CONSENT OF MANARAS-OPERA. IT IS LOANED IN CONFIDENCE FOR MUTUAL ASSISTANCE PURPOSES ONLY. MANARAS-OPERA MAY AT ANY TIME, WRITTEN MODIFY THE DRAWING AND/OR INFORMATION CONTAINED HEREIN.

No	Qty	DESCRIPTION	# MANARAS	REV
1		OSH OUTPUT SHAFT	SHAFT117	1
2		41B32 X 1 K0 GS PH5/16	SPR41B32X1P5/16	
3		PIN SLOTTED SPRING 5/16 X 2	PIN021	
4		PIN SLOTTED SPRING 4.5X50MM HD	PIN028	
5		OPERA SPACER 1"	SPACER009	1
6		410B14A32 X 1 K0 OS	SPR410B14A32X1	
7		COLLAR 1"	COLLAR007	
8		5/16-18 X 5/16 SET SCREW	SCREW003	
9		COLLAR 1"	COLLAR007	
10		SPACER 1"ID X 1-1/2"OD X 0.125"	SPACER030	
11		OSH INPUT SHAFT	SHAFT116	6
12		410B14 X 3/4 K0 OS PH1/4	SPR410B14X3/4	3
13		PIN SLOTTED SPRING 1/4 X 1-3/4	PIN020	
14		OPERA SPACER 3/4"	SPACER008	1
15		41B14 410A32 X 3/4 K0 OS	SPR41B14 410A32X3/4	
16		COLLAR 3/4"	COLLAR005	
17		5/16-18 X 5/16 SET SCREW	SCREW003	
18		#410-1R48P(INCL.1C/L)	CHAIN058	
19		#410-1R48P(INCL.1C/L)	CHAIN058	
20		#41-1R48P(INCL.1C/L)	CHAIN059	
21		RIGHT HAND SIDE FOR OPERA	FRAME037	24
22		2-BOLT FLANGE BEARING ID 5/8" BLACK	BEARING051	
23		3/8-16 X 1-1/4 RND HD SQ NECK BOLT	BOLT059	
24		HELICAL SPRING LOCK WASHER 3/8 ZP	WASHER030	
25		3/8-16 HEX NUT ZP	NUT010	
26		3/8-16 X 1-1/4 RND HD SQ NECK BOLT	BOLT059	
27		HELICAL SPRING LOCK WASHER 3/8 ZP	WASHER030	
28		3/8-16 HEX NUT ZP	NUT010	
29		2-BOLT FLANGE BEARING ID 1" BLACK	BEARING047	
30		3/8-16 X 1-1/4 RND HD SQ NECK BOLT	BOLT059	
31		HELICAL SPRING LOCK WASHER 3/8 ZP	WASHER030	
32		3/8-16 HEX NUT ZP	NUT010	
33		3/8-16 X 1-1/4 RND HD SQ NECK BOLT	BOLT059	
34		HELICAL SPRING LOCK WASHER 3/8 ZP	WASHER030	
35		3/8-16 HEX NUT ZP	NUT010	
36		LEFT HAND SIDE FOR OPERA	FRAME038	24
37		2-BOLT FLANGE BEARING ID 3/4" BLACK	BEARING048	
38		3/8-16 X 1-1/4 RND HD SQ NECK BOLT	BOLT059	
39		HELICAL SPRING LOCK WASHER 3/8 ZP	WASHER030	
40		3/8-16 HEX NUT ZP	NUT010	
41		3/8-16 X 1-1/4 RND HD SQ NECK BOLT	BOLT059	
42		HELICAL SPRING LOCK WASHER 3/8 ZP	WASHER030	
43		3/8-16 HEX NUT ZP	NUT010	
44		2-BOLT FLANGE BEARING ID 1" BLACK	BEARING047	
45		3/8-16 X 1-1/4 RND HD SQ NECK BOLT	BOLT059	
46		HELICAL SPRING LOCK WASHER 3/8 ZP	WASHER030	
47		3/8-16 HEX NUT ZP	NUT010	
48		3/8-16 X 1-1/4 RND HD SQ NECK BOLT	BOLT059	
49		HELICAL SPRING LOCK WASHER 3/8 ZP	WASHER030	
50		3/8-16 HEX NUT ZP	NUT010	
51		INTERNAL TOOTH LOCKWASHER NO6 ZP	WASHER062	
52		INTERNAL TOOTH LOCKWASHER NO6 ZP	WASHER062	
53		6-32 X 1.25 MACHINE SCREW	SCREW109	
54		6-32 X 1.25 MACHINE SCREW	SCREW109	
55		HELICAL SPRING LOCK WASHER NO 6 ZP	WASHER023	
56		HELICAL SPRING LOCK WASHER NO 6 ZP	WASHER023	
57		6-32 HEX NUT ZP	NUT002	
58		6-32 HEX NUT ZP	NUT002	
59		SNAP-ACT. SW.SPDT-LEVER "END BEND"	LIMIT025B	0
60		6-32 HEX NYLON LOCK NUT ZP	NUT018	
61		6-32 HEX NYLON LOCK NUT ZP	NUT018	
62		OPERA MOTOR PLATE	PLATE076	10
63		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
64		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
65		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
66		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
67		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
68		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
69		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
70		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	



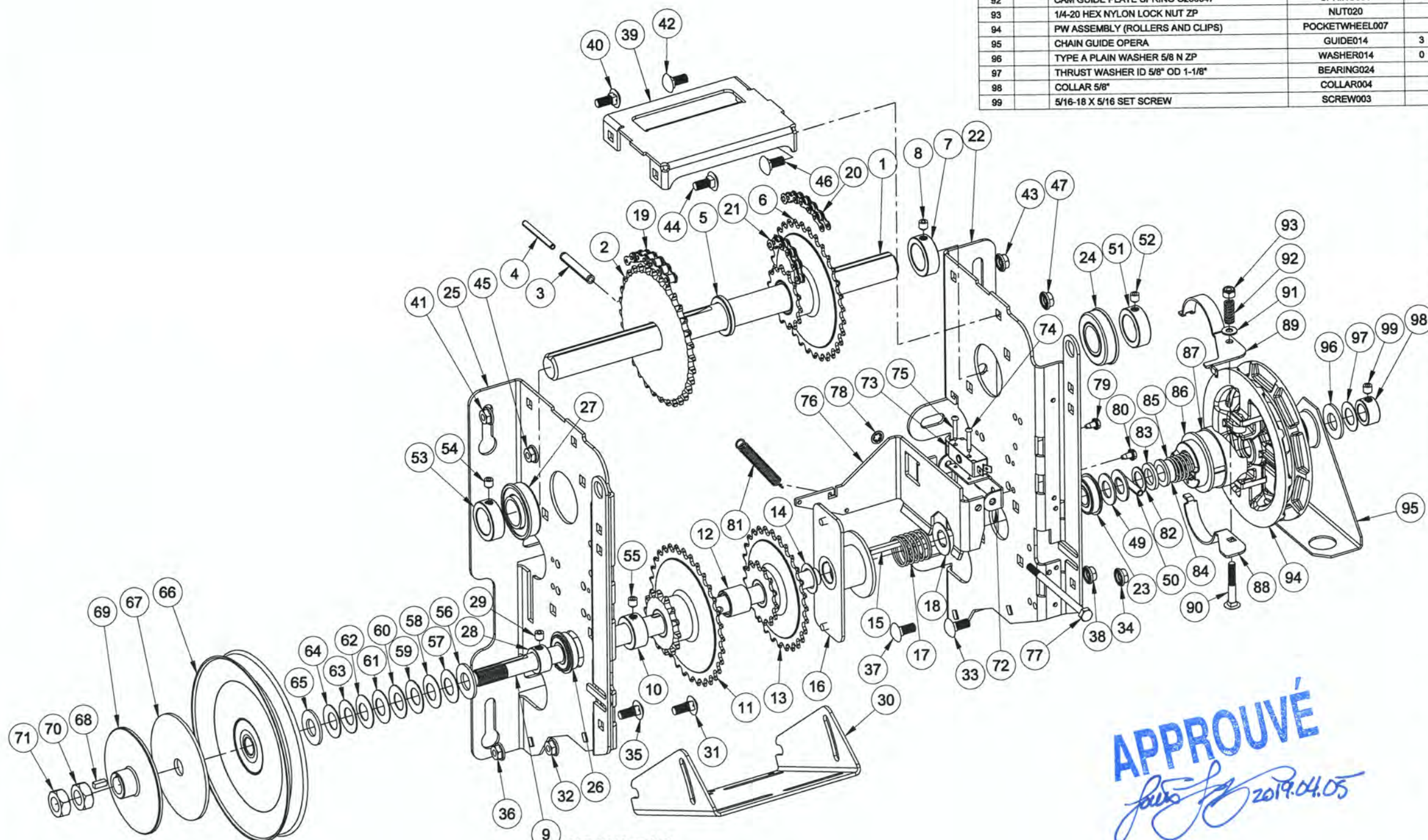
APPROUVÉ
Zorathor R
 2019-01-28

CONFIDENTIAL: THIS DRAWING AND/OR THE INFORMATION CONTAINED HEREIN IS AND REMAINS THE SOLE PROPERTY OF, AND IS PROPRIETARY TO, MANARAS-OPERA. THIS DRAWING AND/OR INFORMATION SHALL BE KEPT CONFIDENTIAL AND MAY NOT BE REPRODUCED, COPIED, MODIFIED, DISCLOSED, TRANSFERRED, OR MADE AVAILABLE TO OTHERS, EXCEPT WITH THE EXPRESS CONSENT OF MANARAS-OPERA. IT IS LOANED IN CONFIDENCE FOR MUTUAL ASSISTANCE PURPOSES ONLY. MANARAS-OPERA MAY AT ANY TIME, WRITTEN MODIFY THE DRAWING AND/OR INFORMATION CONTAINED HEREIN.

PART DESCRIPTION		
SUB ASSY FRAME OSH LEFT HAND		
PART NUMBER	MANARAS-OPERA	
OSHFRAMEHL	138 ONEIDA DRIVE	
DRAWN BY: J. PROULX	POINTE-CLAIRE, QC, H9R 1A8	
DATE: 2012-04-27	TEL: 1-800-381-2260	
UPDATED BY: J. Proulx	FAX: 1-888-826-0608	
DATE: 2019-01-28		



SHEET: 1 of 1



No	Qty	DESCRIPTION	# MANARAS	REV
71		5/8-18 HEX JAM NUT ZP	NUT013	
72		FORK / SWITCH SUPPORT	BRACKET192	1
73		STD SINGLE CUT-OFF SWITCH	LIMIT020	
74		6-32 X 7/8 TYPE F S-TAP. SCREW	SCREW096	
75		6-32 X 7/8 TYPE F S-TAP. SCREW	SCREW096	
76		DISCONNECT FORK RH	FORK001	6
77		1/4-20 X 4 HEX BOLT	BOLT016	
78		PUSH NUT 1/4"	CLIP029	
79		10-24 X 3/8 TYPE T S-TAP. SCREW	SCREW022	
80		10-24 X 3/8 TYPE T S-TAP. SCREW	SCREW022	
81		EXT. SPRING 3/8 OD	SPRING042	
82		FLT WASHER 5/8 (.630X.955X.047) ZP	WASHER018	0
83		OILLITE WASHER (.625X1.00X.125)	WASHER057	0
84		OPERA DISCONNECT SPRING BUSHING	BUSHING056	2
85		OPERA - DISCONNECT SPRING	SPRING040	3
86		SYNTHETIC DISCONNECT CAM OPERA	CAM017	0
87		OPERA DISCONNECT FRICTION BAND	SHOE011	
88		DISCONNECT SWITCH SHOE A	SHOE009	5
89		DISCONNECT SWITCH SHOE	SHOE010	2
90		1/4-20 X 1-3/4 RND HD SQ NECK BOLT	BOLT094	
91		TYPE A PLAIN WASHER 3/16 ZP	WASHER003	0
92		CAM GUIDE PLATE SPRING C260047	SPRING001	0
93		1/4-20 HEX NYLON LOCK NUT ZP	NUT020	
94		PW ASSEMBLY (ROLLERS AND CLIPS)	POCKETWHEEL007	
95		CHAIN GUIDE OPERA	GUIDE014	3
96		TYPE A PLAIN WASHER 5/8 N ZP	WASHER014	0
97		THRUST WASHER ID 5/8" OD 1-1/8"	BEARING024	
98		COLLAR 5/8"	COLLAR004	
99		5/16-18 X 5/16 SET SCREW	SCREW003	

No	Qty	DESCRIPTION	# MANARAS	REV
1		OPERA OUTPUT SHAFT	SHAFT102	5
2		41B32 X 1 K0 0S PH5/16	SPR41B32X1P5/16	
3		PIN SLOTTED SPRING 5/16 X 2	PIN021	
4		PIN SLOTTED SPRING 4.5X50MM HD	PIN028	
5		OPERA-MJ SPACER 3/16 X 1"	SPACER013	
6		410B14A32 X 1 K0 0S	SPR410B14A32X1	
7		COLLAR 1"	COLLAR007	
8		5/16-18 X 5/16 SET SCREW	SCREW003	
9		OPERA-HJ RIGHT INPUT SHAFT	SHAFT111	1
10		COLLAR 3/4"	COLLAR005	
11		41B14_410A32 X 3/4 K0 0S	SPR41B14_410A32X3/4	
12		OPERA SPACER 3/4"	SPACER008	1
13		410B14A28 X 3/4 K0 0S	SPR410B14A28X3/4	
14		SHIM WASHER (.750X1.125X.031) ZP	WASHER058	0
15		KEY 3/16 X 1-1/2 ROUNDED ENDS	KW013	5
16		COUPLING 3/4 2 PINS 1/4	COUPLING014	3
17		COMP. SPRING 1"ID 2"L	SPRING041	
18		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
19		#41-1R48P(INCL.1C/L)	CHAIN059	
20		#410-1R48P(INCL.1C/L)	CHAIN058	
21		#410-1R48P(INCL.1C/L)	CHAIN058	
22		RIGHT HAND SIDE FOR OPERA	FRAME037	24
23		FLANGED PRECISION BEARING ID 5/8"	BEARING006	
24		FLANGED BEARING ID 1"	BEARING007	
25		LEFT HAND SIDE FOR OPERA	FRAME038	24
26		FLANGED PRECISION BEARING ID 5/8"	BEARING006	
27		FLANGED BEARING ID 1"	BEARING007	
28		COLLAR 5/8"	COLLAR004	
29		5/16-18 X 5/16 SET SCREW	SCREW003	
30		OPERA MOTOR PLATE	PLATE078	10
31		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
32		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
33		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
34		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
35		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
36		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
37		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
38		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
39		OPERA HANDLE	HANDLE005	9
40		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
41		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
42		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
43		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
44		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
45		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
46		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
47		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
48		FLT WASHER 5/8 (.640X1.18X.065) ZP	WASHER043	0
49		FLT WASHER 5/8 (.640X1.18X.065) ZP	WASHER043	0
50		PIN SLOTTED SPRING 1/4 X 1-3/4	PIN020	
51		COLLAR 1"	COLLAR007	
52		5/16-18 X 5/16 SET SCREW	SCREW003	
53		COLLAR 1"	COLLAR007	
54		5/16-18 X 5/16 SET SCREW	SCREW003	
55		5/16-18 X 5/16 SET SCREW	SCREW003	
56		TYPE A PLAIN WASHER 5/8 N ZP	WASHER014	0
57		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
58		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
59		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
60		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
61		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
62		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
63		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
64		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
65		TYPE A PLAIN WASHER 5/8 N ZP	WASHER014	0
66		PULLEY 7" x 5/8" 5LB	PULLEY020	6
67		CL.PAD 5/8x4x0.125"	CLUTCHPAD005	3
68		KEY 3/16 X 1/2	KW031	5
69		OPERA CLUTCHPLATE	CLUTCHPLATE006	3
70		5/8-18 HEX JAM NUT ZP	NUT013	

APPROUVÉ
Jules Proulx 2019.04.05

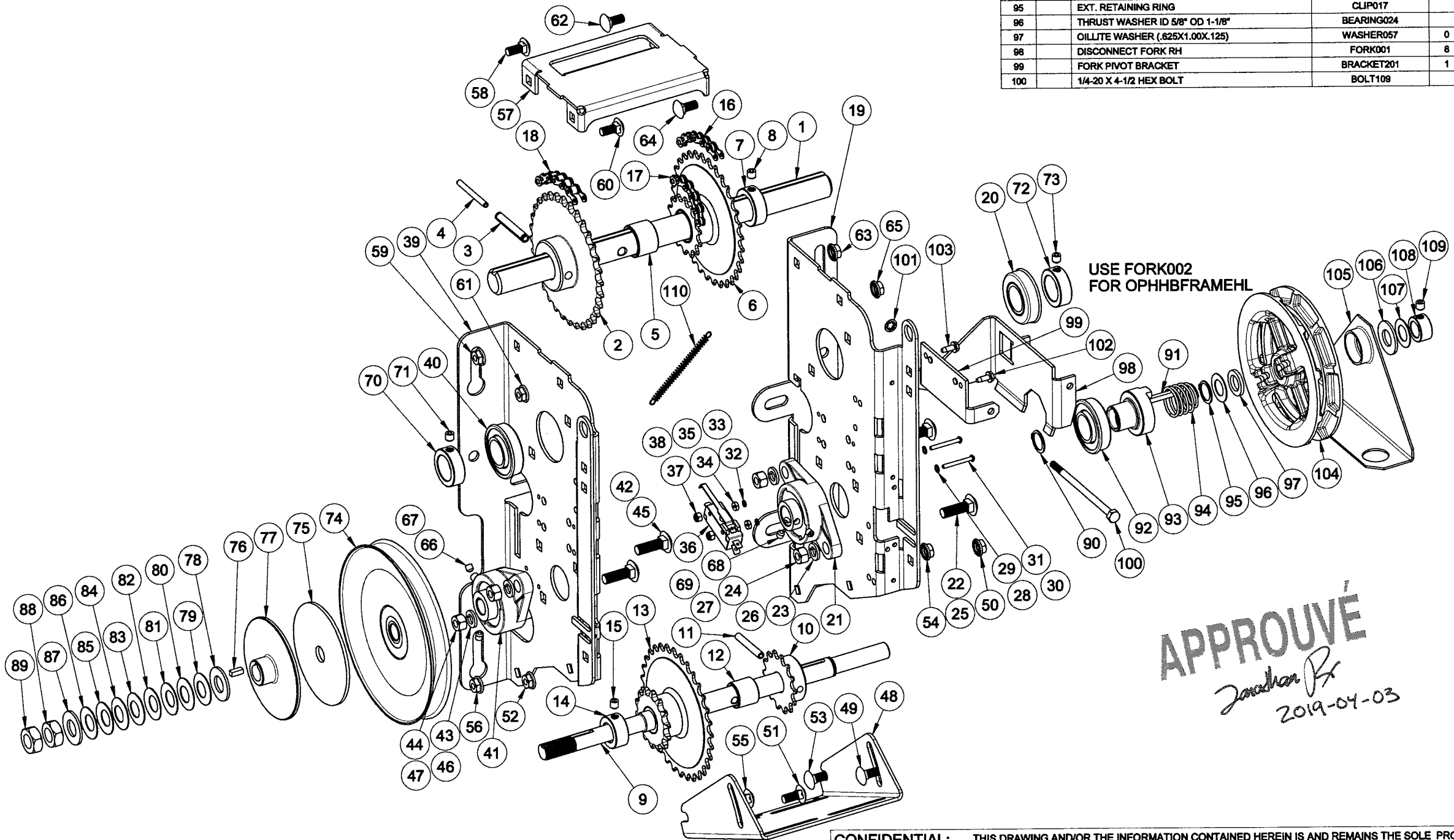
PART DESCRIPTION
SUB ASSY FRAME OHJ RIGHT HAND

PART NUMBER OHJFRAMEHR	MANARAS-OPERA 136 ONEIDA DRIVE POINTE-CLAIRE, QC, H9R 1A8 TEL: 1-800-361-2260 FAX: 1-888-626-0806
DRAWN BY: J. PROULX	
DATE: 2012-09-19	
UPDATED BY: L.F. MARCEAU	
DATE: 2019.04.05	

Manaras
Opera
SHEET: 1 of 1

CONFIDENTIAL: THIS DRAWING AND/OR THE INFORMATION CONTAINED HEREIN IS AND REMAINS THE SOLE PROPERTY OF, AND IS PROPRIETARY TO, MANARAS-OPERA. THIS DRAWING AND/OR INFORMATION SHALL BE KEPT CONFIDENTIAL AND MAY NOT BE REPRODUCED, COPIED, MODIFIED, DISCLOSED, TRANSFERRED, OR MADE AVAILABLE TO OTHERS, EXCEPT WITH THE EXPRESS CONSENT OF MANARAS-OPERA. IT IS LOANED IN CONFIDENCE FOR MUTUAL ASSISTANCE PURPOSES ONLY. MANARAS-OPERA MAY AT ANY TIME, WRITTEN MODIFY THE DRAWING AND/OR INFORMATION CONTAINED HEREIN.

No	Qty	DESCRIPTION	# MANARAS	REV
1		OPERA OUTPUT SHAFT	SHAFT102	5
2		41B32 X 1 K0 0S PH5/16	SPR41B32X1P5/16	
3	8	PIN SLOTTED SPRING 5/16 X 2	PIN021	
4	3	PIN SLOTTED SPRING 4.5X50MM HD	PIN028	
5	5	OPERA SPACER 1"	SPACER009	1
6		410B14A32 X 1 K0 0S	SPR410B14A32X1	
7		COLLAR 1"	COLLAR007	
8		5/16-18 X 5/16 SET SCREW	SCREW003	
9		OSH INPUT SHAFT	SHAFT116	6
10		410B14 X 3/4 K0 0S PH1/4	SPR410B14X3/4	3
11		PIN SLOTTED SPRING 1/4 X 1-3/4	PIN020	
12		OPERA SPACER 3/4"	SPACER008	1
13		41B14 410A32 X 3/4 K0 0S	SPR41B14_410A32X3/4	
14		COLLAR 3/4"	COLLAR005	
15		5/16-18 X 5/16 SET SCREW	SCREW003	
16		#410-1R48P(INCL.1C/L)	CHAIN058	
17		#410-1R48P(INCL.1C/L)	CHAIN058	
18		#41-1R48P(INCL.1C/L)	CHAIN059	
19		RIGHT HAND SIDE FOR OPERA	FRAME037	24
20	5	FLANGED BEARING ID 1"	BEARING007	
21		2-BOLT FLANGE BEARING ID 3/4" BLACK	BEARING048	
22	A	3/8-16 X 1-1/4 RND HD SQ NECK BOLT	BOLT059	
23	2	HELICAL SPRING LOCK WASHER 3/8 ZP	WASHER030	
24		3/8-16 HEX NUT ZP	NUT010	
25		3/8-16 X 1-1/4 RND HD SQ NECK BOLT	BOLT059	
26		HELICAL SPRING LOCK WASHER 3/8 ZP	WASHER030	
27	8	3/8-16 HEX NUT ZP	NUT010	
28		INTERNAL TOOTH LOCKWASHER NO6 ZP	WASHER062	
29		INTERNAL TOOTH LOCKWASHER NO6 ZP	WASHER062	
30		6-32 X 1.25 MACHINE SCREW	SCREW109	
31		6-32 X 1.25 MACHINE SCREW	SCREW109	
32		HELICAL SPRING LOCK WASHER NO 6 ZP	WASHER023	
33		HELICAL SPRING LOCK WASHER NO 6 ZP	WASHER023	
34		6-32 HEX NUT ZP	NUT002	
35		6-32 HEX NUT ZP	NUT002	
36		SNAP-ACT. SW.SPDT-LEVER "END BEND"	LIMIT025B	0
37		6-32 HEX NYLON LOCK NUT ZP	NUT018	
38		6-32 HEX NYLON LOCK NUT ZP	NUT018	
39		LEFT HAND SIDE FOR OPERA	FRAME038	24
40		FLANGED BEARING ID 1"	BEARING007	
41		2-BOLT FLANGE BEARING ID 5/8" BLACK	BEARING051	
42		3/8-16 X 1-1/4 RND HD SQ NECK BOLT	BOLT059	
43		HELICAL SPRING LOCK WASHER 3/8 ZP	WASHER030	
44		3/8-16 HEX NUT ZP	NUT010	
45		3/8-16 X 1-1/4 RND HD SQ NECK BOLT	BOLT059	
46		HELICAL SPRING LOCK WASHER 3/8 ZP	WASHER030	
47		3/8-16 HEX NUT ZP	NUT010	
48		OPERA MOTOR PLATE	PLATE078	10
49		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
50		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
51		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
52		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
53		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
54		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
55		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
56		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
57		OPERA HANDLE	HANDLE005	9
58		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
59		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
60		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
61		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
62		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
63		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
64		5/16-18 X 3/4 RND HD SQ NECK BOLT	BOLT093	
65		5/16-18 HEX SERRATED FLANG NUT ZP	NUT055	
66		1/4-28 X 1/4 SET SCREW	SCREW002	
67		1/4-28 X 1/4 SET SCREW	SCREW002	
68		1/4-28 X 1/4 SET SCREW	SCREW002	
69		1/4-28 X 1/4 SET SCREW	SCREW002	
70		COLLAR 1"	COLLAR007	



No	Qty	DESCRIPTION	# MANARAS	REV
71		5/16-18 X 5/16 SET SCREW	SCREW003	
72		COLLAR 1"	COLLAR007	
73		5/16-18 X 5/16 SET SCREW	SCREW003	
74		PULLEY 7" x 5/8" SLUB	PULLEY020	8
75	3	CL.PAD 5/8x4x0.125"	CLUTCHPAD005	3
76	0	KEY 3/16 X 1/2	KW031	5
77		OPERA CLUTCHPLATE	CLUTCHPLATE008	3
78		TYPE A PLAIN WASHER 5/8 N ZP	WASHER014	0
79		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
80		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
81		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
82		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
83		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
84		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
85		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
86		BELLEVILLE WASHER (31.5X16.3X0.8)	WASHER035	
87		TYPE A PLAIN WASHER 5/8 N ZP	WASHER014	0
88		5/8-18 HEX JAM NUT ZP	NUT013	
89		5/8-18 HEX JAM NUT ZP	NUT013	
90		EXT. RETAINING RING	CLIP017	
91	5	KEY 3/16 X 1-1/2 ROUNDED ENDS	KW013	5
92		FLANGED BEARING ID 1"	BEARING007	
93		MANUAL HOIST COUPLING	COUPLING019	A
94		COMP. SPRING DISC. OSH	SPRING043	2
95		EXT. RETAINING RING	CLIP017	
96		THRUST WASHER ID 5/8" OD 1-1/8"	BEARING024	
97		OILITE WASHER (.625X1.00X.125)	WASHER057	0
98		DISCONNECT FORK RH	FORK001	8
99		FORK PIVOT BRACKET	BRACKET201	1
100		1/4-20 X 4-1/2 HEX BOLT	BOLT109	

APPROUVÉ
J. Proulx
 2019-04-03

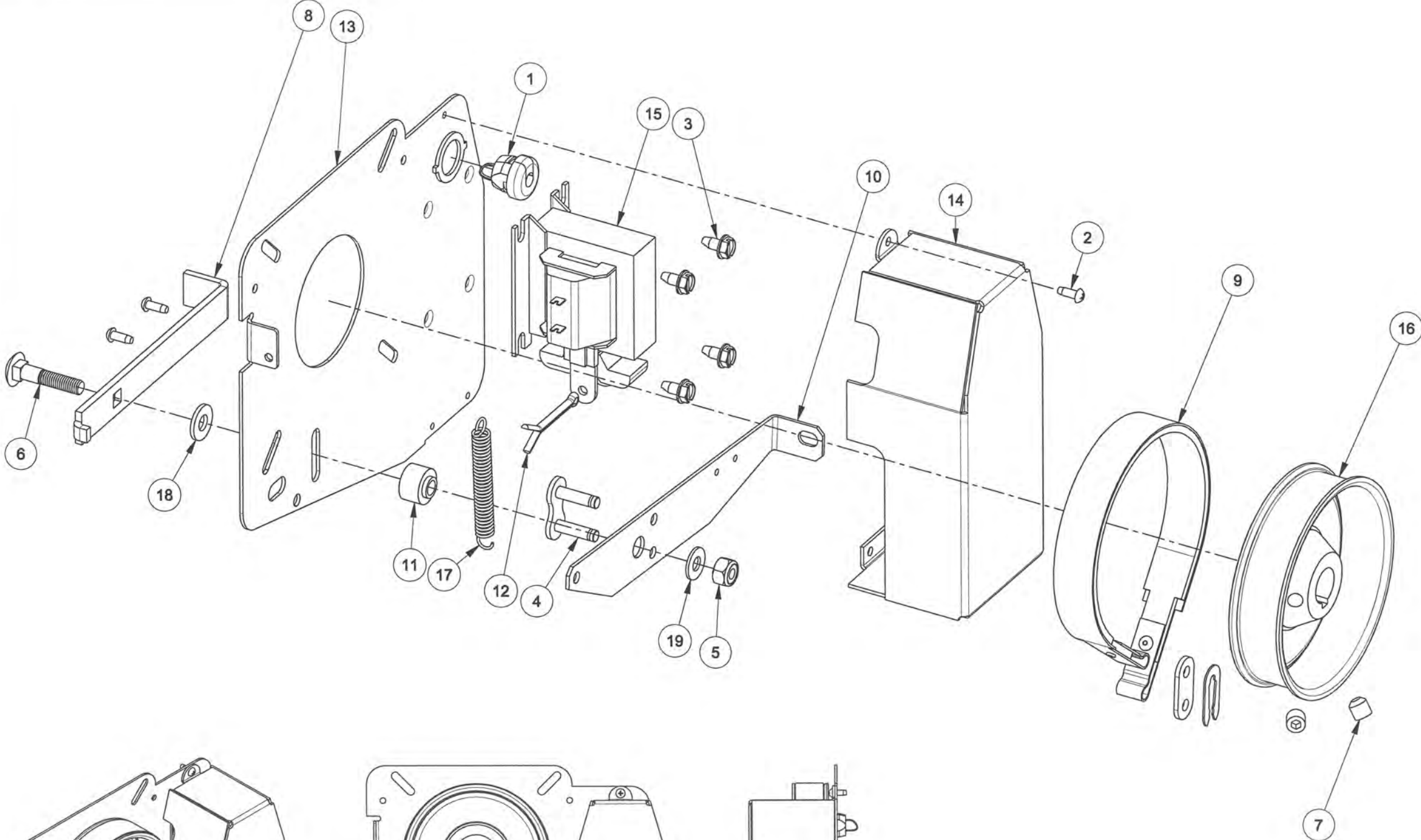
CONFIDENTIAL: THIS DRAWING AND/OR THE INFORMATION CONTAINED HEREIN IS AND REMAINS THE SOLE PROPERTY OF, AND IS PROPRIETARY TO, MANARAS-OPERA. THIS DRAWING AND/OR INFORMATION SHALL BE KEPT CONFIDENTIAL AND MAY NOT BE REPRODUCED, COPIED, MODIFIED, DISCLOSED, TRANSFERRED, OR MADE AVAILABLE TO OTHERS, EXCEPT WITH THE EXPRESS CONSENT OF MANARAS-OPERA. IT IS LOANED IN CONFIDENCE FOR MUTUAL ASSISTANCE PURPOSES ONLY. MANARAS-OPERA MAY AT ANY TIME, WRITTEN MODIFY THE DRAWING AND/OR INFORMATION CONTAINED HEREIN.

PART DESCRIPTION
SUB ASSY FRAME OPH HB RIGHT HAND

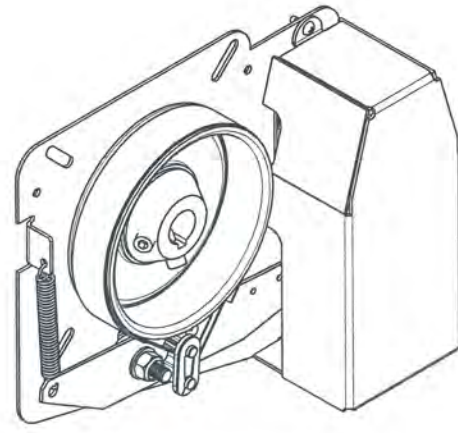
PART NUMBER OPHhBFAMEHR	MANARAS-OPERA 136 ONEIDA DRIVE POINTE-CLAIRE, QC, H9R 1A8 TEL: 1-800-361-2280 FAX: 1-888-626-0606	
DRAWN BY: J. PROULX DATE: 2012-05-03	UPDATED BY: J. Proulx DATE: 2019-04-03	SHEET: 1 of 1

Qty	DESCRIPTION	# MANARAS
120V - 1PH	1 SOLENOID SWITCH 120V	SOLENOID001
230V - 1PH	1 SOLENOID SWITCH 240V	SOLENOID002
208V - 3PH	1 SOLENOID SWITCH 240V	SOLENOID002
460V - 3PH	1 SOLENOID SWITCH 440V	SOLENOID003
575V - 3PH	1 SOLENOID SWITCH 575V	SOLENOID004

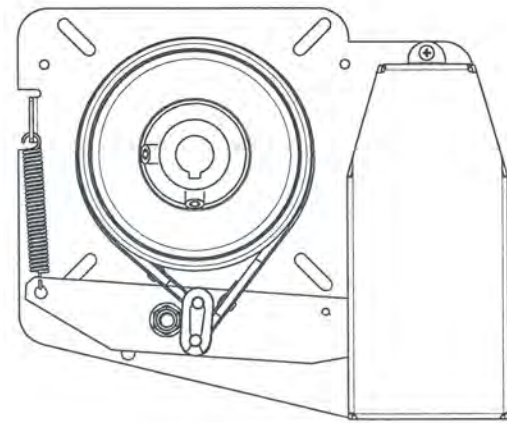
No	Qty	DESCRIPTION	# MANARAS	REV
1	1	0.300 CABLESTRAIN RELIEF 5/8" OD	BUSHING087	
2	3	6-32 X 3/8 TYPE T S-TAP. SCREW	SCREW094	
3	4	10-24 X 3/8 TYPE T S-TAP. SCREW	SCREW022	
4	1	#50 CONNECTING LINK 50-1	LINK011	
5	1	1/4-20 HEX NYLON LOCK NUT ZP	NUT020	
6	1	1/4-20 X 1-1/4 RND HD SQ NECK BOLT	BOLT083	
7	2	5/16-18 X 5/16 SET SCREW	SCREW003	
8	1	ADJUSTMENT BRAKE LEVER	LEVER064	3
9	1	BRAKE BAND ASSEMBLY HEAVY DUTY	BRAKEPART019	
10	1	BRAKE LEVER	LEVER065	8
11	1	BRAKE LEVER PIVOT	BUSHING053	3
12	1	PIN COTTER 1/8 X 1-1/2	PIN001	
13	1	PLATED BRAKE PLATE	PLATE084	10
14	1	PLATED SOLENOID COVER	COVER048	5
15	1	SOLENOID	SEE TABLE	
16	1	STEEL BRAKE DRUM ID 0.626	DRUM005	2
17	1	TROLLEY ARM DISCONNECT SPRING	SPRING026	
18	1	TYPE A PLAIN WASHER 1/4 N ZP	WASHER004	0
19	1	TYPE A PLAIN WASHER 3/16 ZP	WASHER003	0



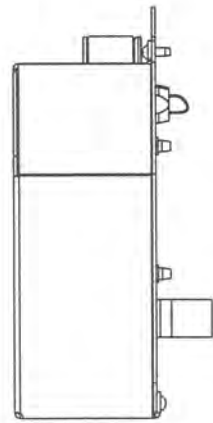
NOT SHOWN IN DRAWING		
Qty	DESCRIPTION	# MANARAS
1	7X7 1/16"X33"CW STOP	CABLE026
1	DISCONNECT CHAIN 5" LONG	CHAIN082
2	S HOOK	HOOK001
1	CABLE SLEEVE 1/16	SLEEVE001
1	EXTENSION SPRING E480-063-3275	SPRING027



ASSEMBLED ISO VIEW



ASSEMBLED FRONT VIEW WITHOUT SOLENOID COVER



ASSEMBLED SIDE VIEW

APPROUVÉ
Zanahar
 2016-12-08

PART DESCRIPTION	
OSH BAND BRAKE ASSEMBLY KIT	
PART NUMBER	MANARAS-OPERA
BRAKE013 (DRAWING021)	136 ONEIDA DRIVE
DRAWN BY: J. PROULX	POINTE-CLAIRE, QC, H9R 1A8
DATE: 2010-08-05	TEL: 1-800-361-2260
UPDATED BY: J. PROULX	FAX: 1-888-626-0606
DATE: 2013-03-12	

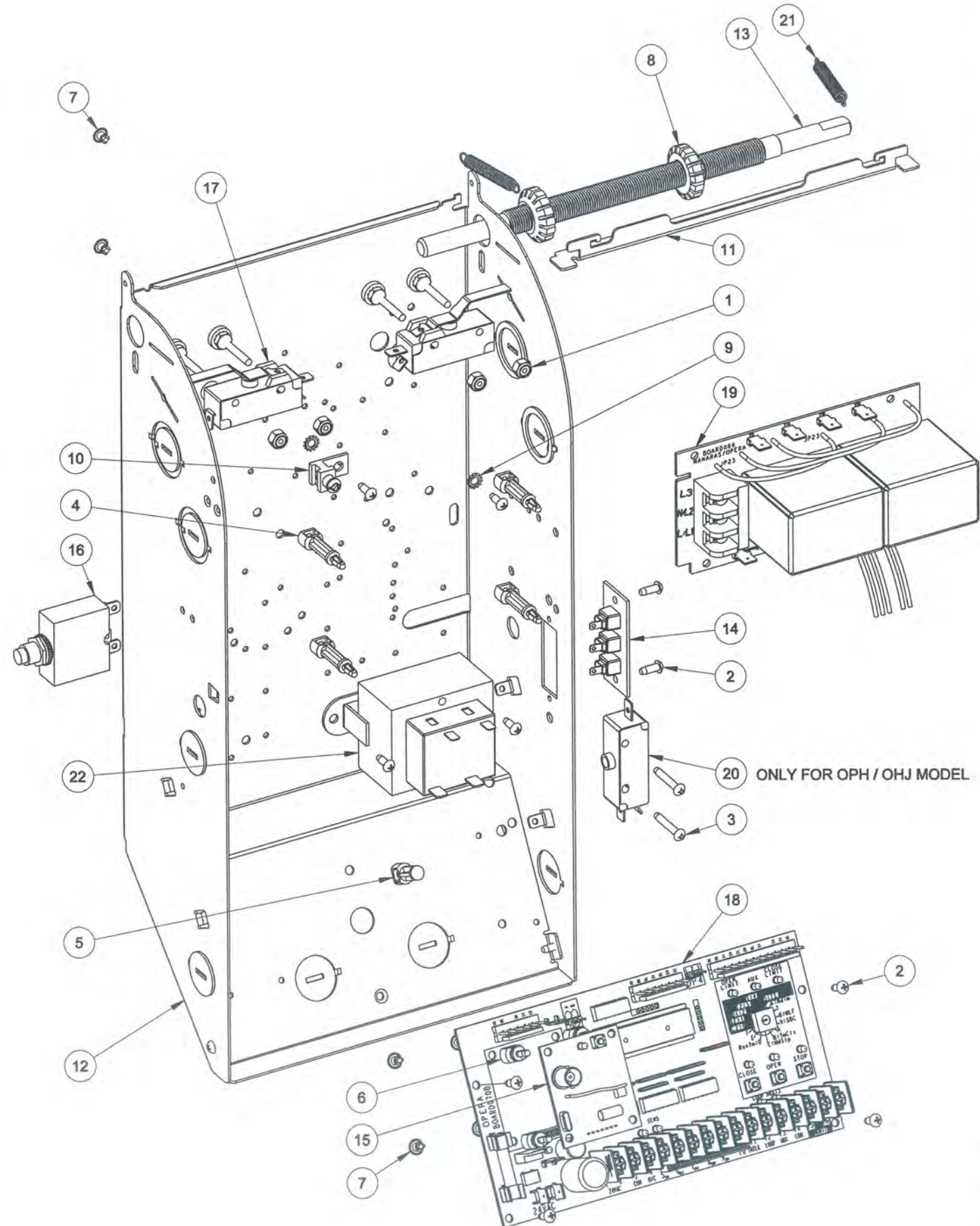


CONFIDENTIAL: THIS DRAWING AND/OR THE INFORMATION CONTAINED HEREIN IS AND REMAINS THE SOLE PROPERTY OF, AND IS PROPRIETARY TO, MANARAS-OPERA. THIS DRAWING AND/OR INFORMATION SHALL BE KEPT CONFIDENTIAL AND MAY NOT BE REPRODUCED, COPIED, MODIFIED, DISCLOSED, TRANSFERRED, OR MADE AVAILABLE TO OTHERS, EXCEPT WITH THE EXPRESS CONSENT OF MANARAS-OPERA. IT IS LOANED IN CONFIDENCE FOR MUTUAL ASSISTANCE PURPOSES ONLY. MANARAS-OPERA MAY AT ANY TIME, WRITTEN MODIFY THE DRAWING AND/OR INFORMATION CONTAINED HEREIN.

V-PH	Qty	DESCRIPTION	# MANARAS
120V - 1PH	1	TRANSFO 120/240V-24V 40VA	TRANSF143
	1	L N 115VAC 1PH STICKER	STICKER035
240V - 1PH	1	TRANSFO 120/240V-24V 40VA	TRANSF143
	1	L1 L2 230VAC 1 PH STICKER	STICKER029
208V - 3PH	1	TRANSFO 240V/208V-24V 40VA	TRANSF037
	1	L1 L2 L3 208VAC 3PH STICKER	STICKER031
480V - 3PH	1	TRANSFO 480V-24V 40VA	TRANSF088
	1	L1 L2 L3 480VAC 3PH STICKER	STICKER032
600V - 3PH	1	TRANSFO 575V-24V 40VA	TRANSF142
	1	L1 L2 L3 575VAC 3PH STICKER	STICKER033

HARNESS		
Qty	DESCRIPTION	# MANARAS
1	CONTROL HARNESS (INSIDE CBOX)	HARNESS099

LABELS		
Qty	DESCRIPTION	# MANARAS
1	USE COPPER STICKER	STICKER068
1	2 AMP FUSE STICKER	STICKER003



No	Qty	DESCRIPTION	# MANARAS	REV
1	4	6-32 HEX NYLON LOCK NUT ZP	NUT018	
2	10	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	4	BOARD SUPPORT 1 IN.	SUPPORT008	
5	1	BOARD SUPPORT 1/2 CUT	SUPPORT013	
6	4	BOARD SUPPORT 7/16 IN.	SUPPORT014	
7	9	BOARD SUPPORT RIVET	SUPPORT002	
8	2	CAM LIMIT OPERA	CAM011	2
9	2	EXT. OVERLAP TOOTH LOCK WASHER M4	WASHER065	
10	1	GROUND LUG TA61G-JL	CONNECTOR039	
11	1	OPERA CBOX CAMPLATE	CAMPLATE019	5
12	1	OPERA CONTROL BOX	CBOX040-041	
13	1	OPERA LIMIT SHAFT	SHAFT103	9
14	1	RADIO CONTROL TERM STRIP	TSTRIP005	
15	1	RADIO REC. ROLL CODE	RADIORE101	
16	1	RESET	SEE MOTOR TABLE	
17	2	SINGLE LIMIT SWITCH - LEVER 46 DEG	LIMIT023	4
18	1	STD ELECT. CONTR. BOARD	BOARD070	
19	1	STD ELECT. POWER BOARD 2 RELAYS	BOARD068	
20	1	STD SINGLE CUT-OFF SWITCH	LIMIT020	
21	2	TOGGLE SWITCH SPRING	SPRING030	
22	1	TRANSFORMER	SEE TABLE	

APPROUVÉ
J. Proulx
 2016-09-22

PART DESCRIPTION
SUBA CBOX OPERA BOARD

PART NUMBER CBOX-OP-EM	MANARAS-OPERA 136 ONEIDA DRIVE POINTE-CLAIRE, QC, H9R 1A8
DRAWN BY: J. PROULX	TEL: 1-800-361-2260
DATE: 2010-09-23	FAX: 1-888-626-0606
UPDATED BY: J. PROULX	
DATE: 2016.09.22	

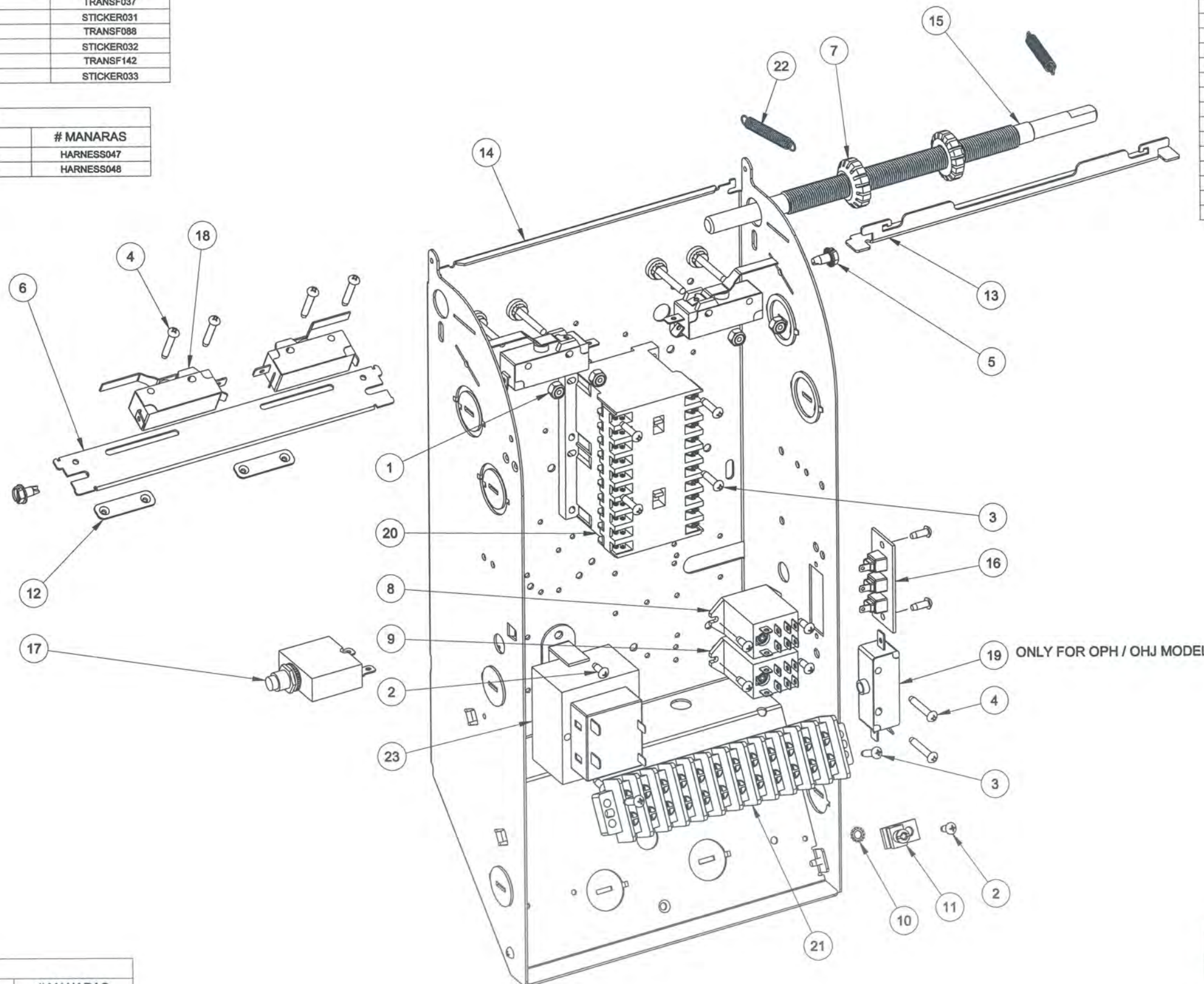


CONFIDENTIAL: THIS DRAWING AND/OR THE INFORMATION CONTAINED HEREIN IS AND REMAINS THE SOLE PROPERTY OF, AND IS PROPRIETARY TO, MANARAS-OPERA. THIS DRAWING AND/OR INFORMATION SHALL BE KEPT CONFIDENTIAL AND MAY NOT BE REPRODUCED, COPIED, MODIFIED, DISCLOSED, TRANSFERRED, OR MADE AVAILABLE TO OTHERS, EXCEPT WITH THE EXPRESS CONSENT OF MANARAS-OPERA. IT IS LOANED IN CONFIDENCE FOR MUTUAL ASSISTANCE PURPOSES ONLY. MANARAS-OPERA MAY AT ANY TIME, WRITTEN MODIFY THE DRAWING AND/OR INFORMATION CONTAINED HEREIN.

V-PH	Qty	DESCRIPTION	# MANARAS
120V - 1PH	1	TRANSFO 120/240V-24V 40VA	TRANSF143
	1	DPDT 120V RELAY	RELAY028
	1	L N 115VAC 1PH STICKER	STICKER035
240V - 1PH	1	TRANSFO 120/240V-24V 40VA	TRANSF143
	1	DPDT 240V RELAY	RELAY027
	1	L1 L2 230VAC 1 PH STICKER	STICKER029
208V - 3PH	1	TRANSFO 240V/208V-24V 40VA	TRANSF037
	1	L1 L2 L3 208VAC 3PH STICKER	STICKER031
480V - 3PH	1	TRANSFO 480V-24V 40VA	TRANSF088
	1	L1 L2 L3 480VAC 3PH STICKER	STICKER032
600V - 3PH	1	TRANSFO 575V-24V 40VA	TRANSF142
	1	L1 L2 L3 575VAC 3PH STICKER	STICKER033

HARNESS		
Qty	DESCRIPTION	# MANARAS
1	CONTROL HARNESS 1 PHASE (INSIDE CBOX)	HARNESS047
1	CONTROL HARNESS 3 PHASE (INSIDE CBOX)	HARNESS048

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	6	6-32 X 5/8 TYPE F S-TAP. SCREW	SCREW095	
4	6	6-32 X 7/8 TYPE F S-TAP. SCREW	SCREW096	
5	2	10-24 X 3/8 TYPE T S-TAP. SCREW	SCREW022	
6	1	ADV LS BRACKET	BRACKET245	4
7	2	CAM LIMIT OPERA	CAM011	2
8	1	DPDT 24V RELAY	RELAY024	
9	1	DPDT RELAY	SEE TABLE	
10	1	EXT. OVERLAP TOOTH LOCK WASHER M4	WASHER065	
11	1	GROUND LUG TA61G-UL	CONNECTOR039	
12	2	LS MOUNTING BRKT	BRACKET246	2
13	1	OPERA CBOX CAMPLATE	CAMPLATE019	5
14	1	OPERA CONTROL BOX	CBOX040-041	
15	1	OPERA LIMIT SHAFT	SHAFT103	9
16	1	RADIO CONTROL TERM STRIP	TSTRIP005	
17	1	RESET	SEE MOTOR TABLE	
18	4	SINGLE LIMIT SWITCH - LEVER 46 DEG	LIMIT023	4
19	1	STD SINGLE CUT-OFF SWITCH	LIMIT020	
20	1	TELEM. REVERS. CONT. 24V	CONTACTOR044	
21	1	TERMINAL STRIP 12 POSITIONS	TSTRIP001	
22	2	TOGGLE SWITCH SPRING	SPRING030	
23	1	TRANSFORMER	SEE TABLE	



APPROUVÉ
Jenabon
 2016-09-22

LABELS		
Qty	DESCRIPTION	# MANARAS
1	2 AMP FUSE STICKER	STICKER003
1	1,2,...8,9 STICKER 1/4X4	STICKER034
1	B2/C2 HW STICKER	STICKER059
1	USE COPPER STICKER	STICKER068

PART DESCRIPTION		
SUBA CBOX OPERA HARDWARE		
PART NUMBER	CBOX-OP-HW	MANARAS-OPERA 138 ONEIDA DRIVE POINTE-CLAIRE, QC, H9R 1A8 TEL: 1-800-361-2260 FAX: 1-888-628-0608
DRAWN BY:	J. PROULX	
DATE:	2010-09-23	
UPDATED BY:	J. PROULX	
DATE:	2016.09.22	
SHEET: 1 of 1		

CONFIDENTIAL: THIS DRAWING AND/OR THE INFORMATION CONTAINED HEREIN IS AND REMAINS THE SOLE PROPERTY OF, AND IS PROPRIETARY TO, MANARAS-OPERA. THIS DRAWING AND/OR INFORMATION SHALL BE KEPT CONFIDENTIAL AND MAY NOT BE REPRODUCED, COPIED, MODIFIED, DISCLOSED, TRANSFERRED, OR MADE AVAILABLE TO OTHERS, EXCEPT WITH THE EXPRESS CONSENT OF MANARAS-OPERA. IT IS LOANED IN CONFIDENCE FOR MUTUAL ASSISTANCE PURPOSES ONLY. MANARAS-OPERA MAY AT ANY TIME, WRITTEN MODIFY THE DRAWING AND/OR INFORMATION CONTAINED HEREIN.