

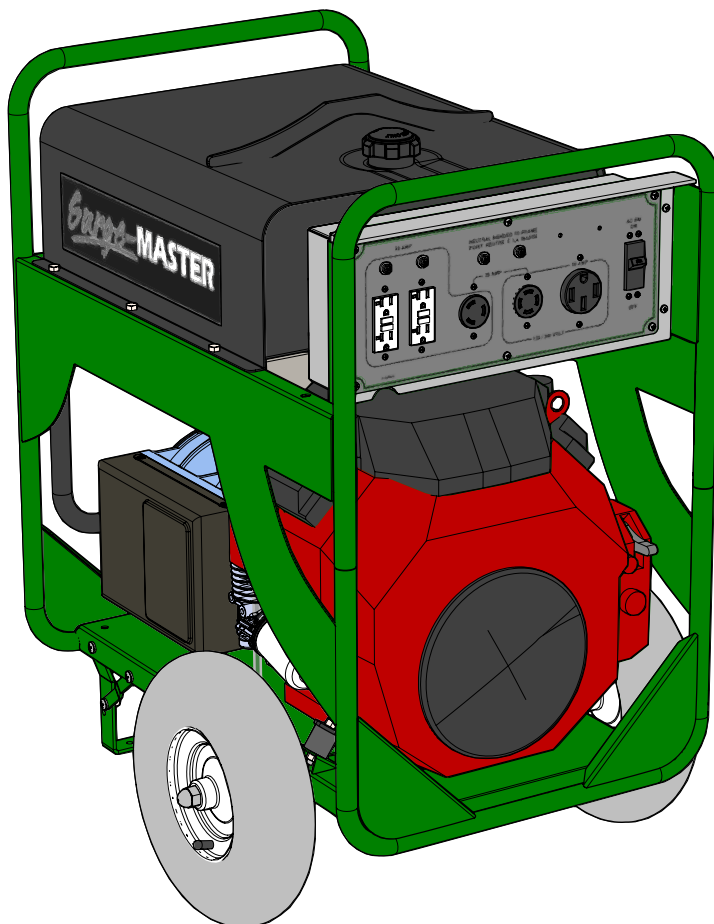


EMB Manufacturing Inc.
4144 Boomer Line · St. Clements, On · N0B 2M0 · Canada
Ph: (519) 699-9283 · Fax: (519) 699-4146
www.surgemaster.ca

SM11000LH/E

Generator Parts Manual

Starting with S/N 8410049



Refer to the operators
manual for safe
operation and
maintenance

Foreword

Surge-Master has prepared this parts manual to assist customers in ordering quality OEM replacement parts.

Proper and regular service and replacing old, worn or broken parts with the correct OEM parts are essential to prolonging the life of your Surge-Master product. Please refer to this manual before ordering any replacement parts.

All information contained in this parts manual is based on the latest product specification available at the time of printing this manual. If your product differs from the specifications contained within this manual contact Surge-Master for information.

Surge-Master reserves the right to alter specifications on their products at any time.

Reproduction of this parts manual of any kind is prohibited without prior written permission from Surge-Master.

For parts and information please contact your dealer. If your dealer is no longer available please go to our website: <http://www.surgemaster.ca> and click on "PARTS INFORMATION".

Table of Contents

Bolt Torque.....	4
Hydraulic Fitting Torque	5
Wheel Lug Torque	5
SM11000LH/E Main Assembly.....	6
Electrical Panel Assembly	7
Alternator.....	8
Wiring Diagram	9
Accessories.....	10

Alternator maintenance should be performed by trained personnel only.



Exercise extreme caution when working with exposed wiring of the alternator, be aware that high voltage discharge of the capacitor is a danger.

Bolt Torque

CHECKING BOLT TORQUE

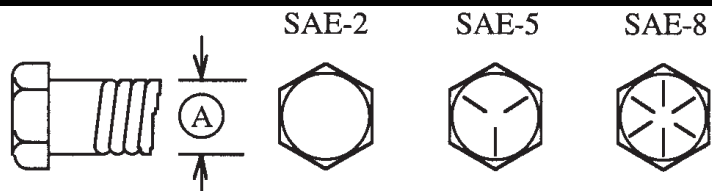
The tables shown below give correct torque values for various bolts and capscrews. Tighten all bolts to the torques specified in chart unless otherwise noted. Check tightness of bolts periodically, using bolt torque chart as a guide. Replace hardware with the same strength bolt.

Torque figures indicated above are valid for non-greased or non-oiled threads and heads unless otherwise specified. Therefore, do not grease or oil bolts or capscrews unless otherwise specified in this manual. When using locking elements, increase torque values by 5%.

* Torque value for bolts and capscrews are identified by their head markings.

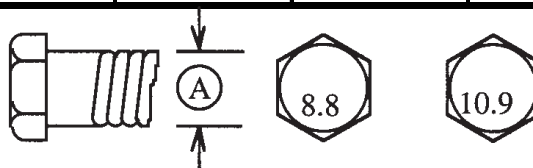
ENGLISH TORQUE SPECIFICATIONS

Bolt Diameter "A"	Bolt Torque*					
	SAE 2 (N.m) (lb-ft)		SAE 5 (N.m) (lb-ft)		SAE 8 (N.m) (lb-ft)	
1/4"	8	6	12	9	17	12
5/16"	13	10	25	19	36	27
3/8"	27	20	45	33	63	45
7/16"	41	30	72	53	100	75
1/2"	61	45	110	80	155	115
9/16"	95	60	155	115	220	165
5/8"	128	95	215	160	305	220
3/4"	225	165	390	290	540	400
7/8"	230	170	570	420	880	650
1"	345	225	850	630	1320	970



METRIC TORQUE SPECIFICATIONS

Bolt Diameter "A"	Bolt Torque*			
	8.8 (N.m) (lb-ft)		10.9 (N.m) (lb-ft)	
M3	0.5	0.4	1.8	1.3
M4	3	2.2	4.5	3.3
M5	6	4	9	7
M6	10	7	15	11
M8	25	18	35	26
M10	50	37	70	52
M12	90	66	125	92
M14	140	103	200	148
M16	225	166	310	229
M20	435	321	610	450
M24	750	553	1050	774
M30	1495	1103	2100	1550
M36	2600	1917	3675	2710



Hydraulic Fitting Torque

Tightening Flare Type Tube Fittings *

1. Check flare and flare seat for defects that might cause leakage.
2. Align tube with fitting before tightening.
3. Lubricate connection and hand tighten swivel nut until snug.
4. To prevent twisting the tube(s), use two wrenches. Place one wrench on the connector body and with the second tighten the swivel nut to the torque shown.

Tube Size OD (in.)	Nut Size Across Flats (in.)	Torque Value*		Recommended Turns To Tighten (After Finger Tightening)	
		(N.m)	(lb-ft)	(Flats)	(Turn)
3/16	7/16	8	6	1	1/6
1/4	9/16	12	9	1	1/6
5/16	5/8	16	12	1	1/6
3/8	11/16	24	18	1	1/6
1/2	7/8	46	34	1	1/6
5/8	1	62	46	1	1/6
3/4	1-1/4	102	75	3/4	1/8
7/8	1-3/8	122	90	3/4	1/8

The torque values shown are based on lubricated connections as in reassembly.

Wheel Lug Torque

It is extremely important safety procedure to apply and maintain proper wheel mounting torque on your trailer axle. Torque wrenches are the best method to assure the proper amount of torque is being applied to a fastener.

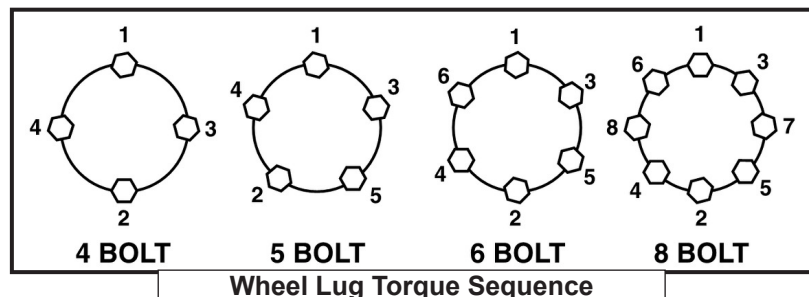
Wheel lugs should be torqued before first road use and after each wheel removal. Check and re torque after the first 16Km (10 miles), 40Km (25 miles), and again at 80Km (50 miles). Check periodically thereafter.

Note: Wheel lugs must be applied and maintained at the proper torque levels to prevent loose wheels, broken studs, and possible dangerous separation of wheels from your axle.

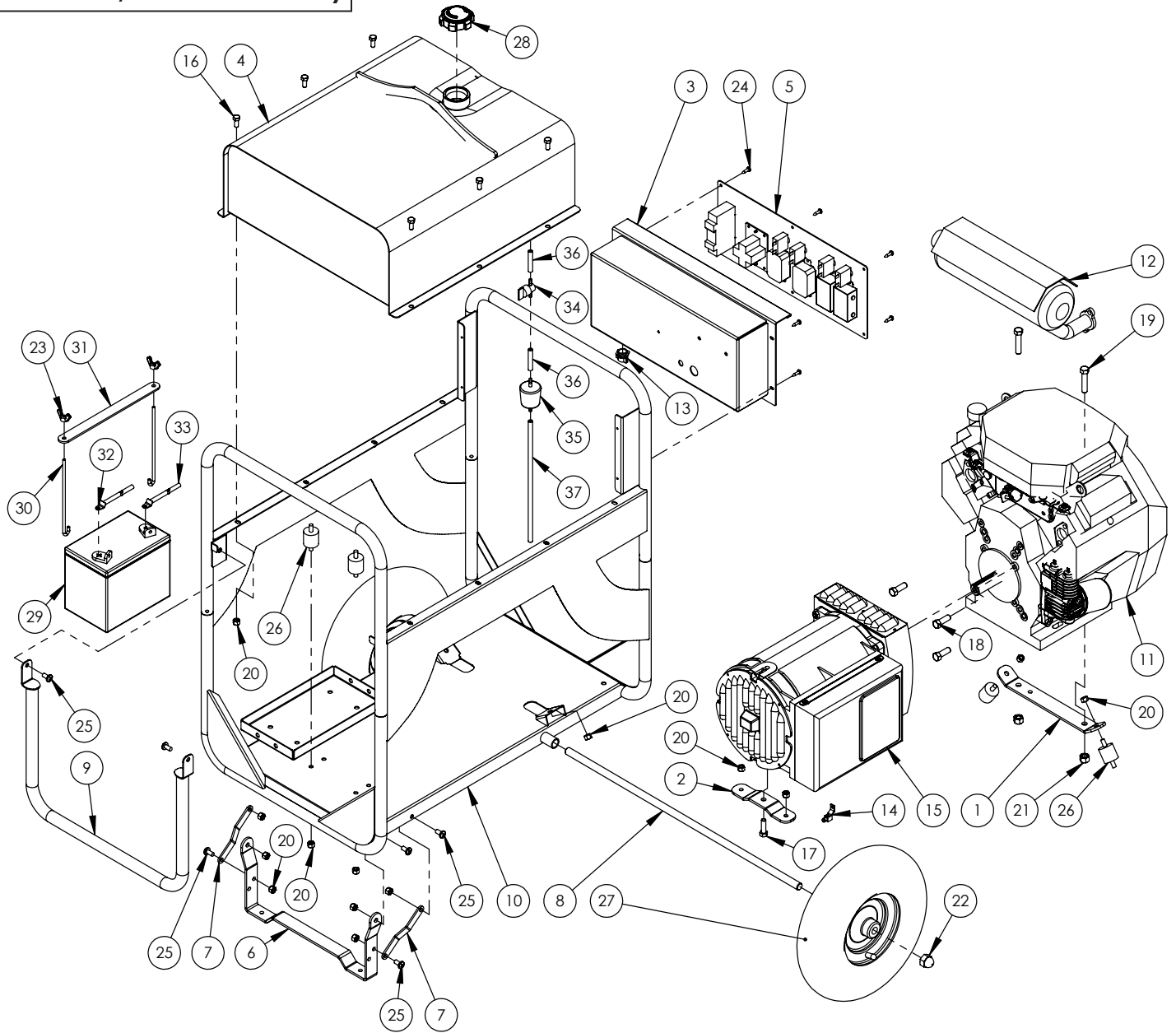
- Start all lugs by hand to prevent cross threading.
- Tighten lugs in sequence, per wheel lug torque sequence chart.
- The tightening of the fasteners should be done in stages. Following the recommended sequence, tighten fasteners per wheel torque requirements chart.

Wheel Torque Requirements

Wheel Size	Torque Unit	1st Stage	2nd Stage	3rd Stage
8"	ft-lbs	12 - 20	30 - 35	45 - 55
	Nm	16 - 26	39 - 45.5	58.5 - 71.5
12"	ft-lbs	20 - 25	35 - 40	50 - 60
	Nm	26 - 32.5	45.5 - 52	65 - 78
13"	ft-lbs	20 - 25	35 - 40	50 - 60
	Nm	26 - 32.5	45.5 - 52	65 - 78
14"	ft-lbs	20 - 25	50 - 60	90 - 120
	Nm	26 - 32.5	65 - 78	117 - 156
15"	ft-lbs	20 - 25	50 - 60	90 - 120
	Nm	26 - 32.5	65 - 78	117 - 156
16"	ft-lbs	20 - 25	50 - 60	90 - 120
	Nm	26 - 32.5	65 - 78	117 - 156



SM11000LH/E Main Assembly

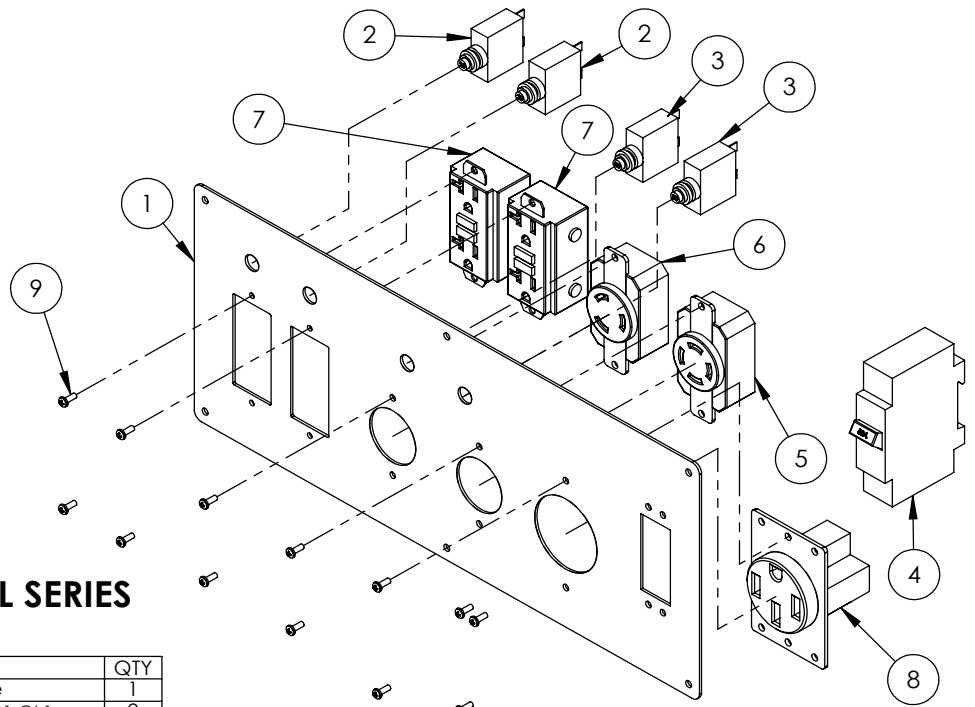


**SURGEMASTER COMMERCIAL
SM11000LHE PARTS BREAKDOWN**

ITEM	PART NO.	DESCRIPTION	QTY
1	4014L405	Engine Mount Plate	1
2	4021L111	5/16 Offset Gen Plate	1
3	4021W106	Housing, Electrical Panel	1
4	4021W115	Fuel Tank, HUF Style	1
5	4064A102	Assembly, SMC Panel	1
6	4064L104	Wheel Kit Stand	1
7	4064L106	Wheel Kit Stand Brace	2
8	4064M101	Axle	1
9	4064W102	Lift Handle	1
10	4064W105	Frame, SM Commercial Gen	1
11	Z47167	Honda GX630 Engine	1
12	Z47169	GX630-690 Muffler	1
13	Z62261	Box Connector, 3/8	1
14	Z62711	Grounding Terminal, 6-14	1
15	Z65407	Alternator, 12kVA	1
16	Z71207	Hex Bolt 5/16NC x 3/4	6
17	Z71312	Hex Bolt 3/8NC x 1-1/4	1
18	Z71412	Hex Bolt 7/16NC x 1-1/4	4
19	Z71420	Hex Bolt 7/16NC x 2	2

ITEM	PART NO.	DESCRIPTION	QTY
20	Z72221	Hex Lock Nut 5/16NC	20
21	Z72240	Hex Lock Nut, 7/16NC	2
22	Z72916	Acorn Nut, 5/8NC	2
23	Z72921	Wing Nut 1/4NF	2
24	Z76712	Self-tapping Screw #10	10
25	Z78306	Machine Screw, 5/16NC x 5/8	8
26	Z79931	Rubber Mount	4
27	Z91315	4.00-6 NHS Tire	2
28	Z93103	Fuel Cap	1
29	Z93201	250 CCA Battery	1
30	Z93202	J-Hook 1/4 x 7	2
31	Z93203	Hold-Down Strap, 1 x 10-1/2	1
32	Z93209	Battery Cable, Pos 20"	1
33	Z93210	Battery Cable, Neg 25"	1
34	Z93301	Fuel Shut-off, 1/4"	1
35	Z93302	Fuel Filter, In-Line 1/4" Large	1
36	Z93303	Fuel Line, 1/4" x 2"	2
37	Z93304	Fuel Line, 1/4" x 12"	1

Electrical Panel Assembly



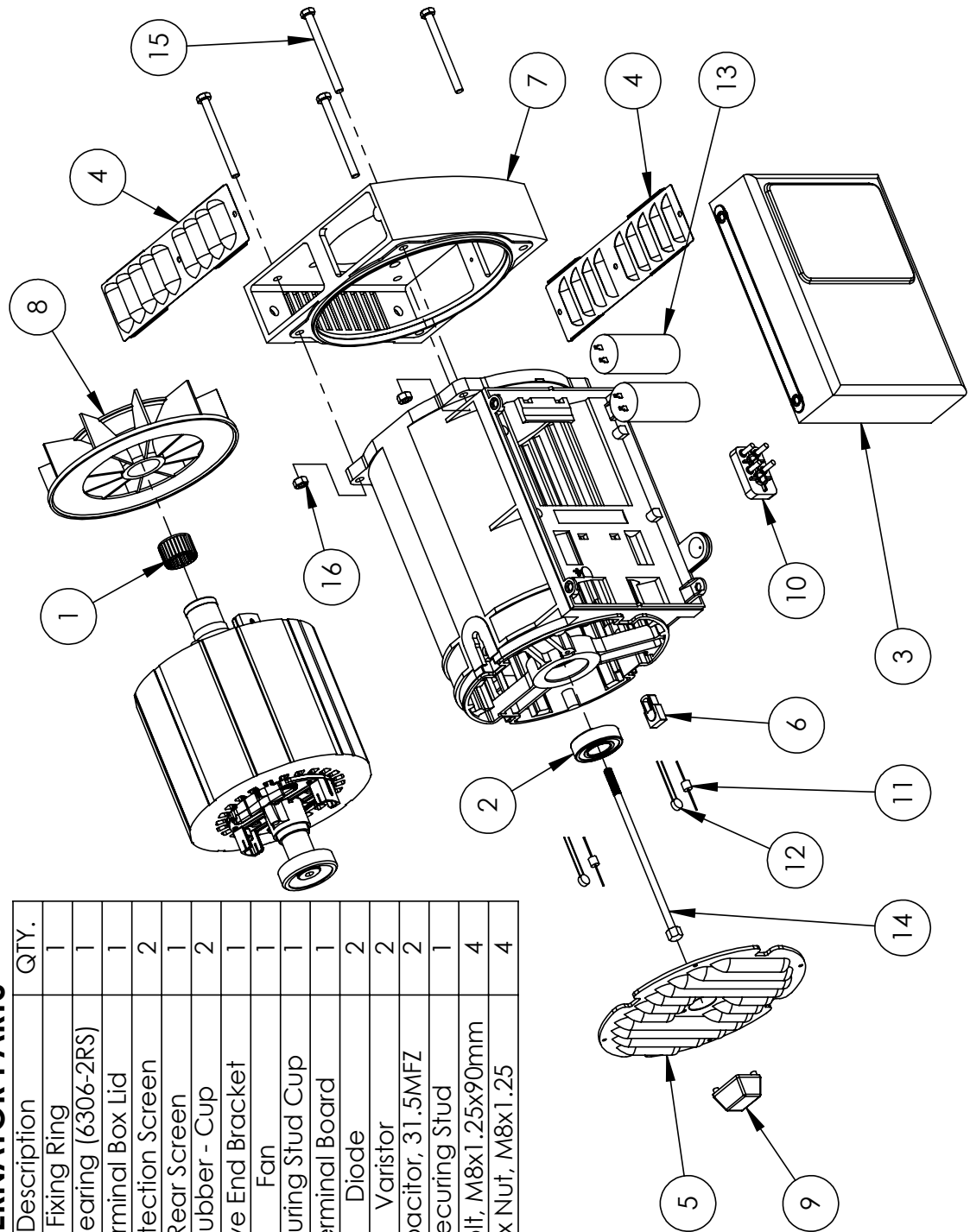
4064A102 SM COMMERCIAL SERIES ELECTRICAL PANEL PARTS

ITEM	PART NO.	DESCRIPTION	QTY
1	4064L110	Panel, SMC Style	1
2	Z62616	Thermal Breaker, 15A TC1 OL1	2
3	Z62618	Thermal Breaker, 25A TC1 OL1	2
4	Z62624	Breaker, 50A	1
5	Z63403	Recp., 30A 125/250V L14-30	1
6	Z63404	Recp., 30A 125V L5-30	1
7	Z63408	Recp., 20A 125V GFCI 5-20R	2
8	Z63409	Recp., 50A 125/250V 14-50R	1
9	Z78304	Machine Screw, #6NC x 3/8	14

Alternator

Z65407 12kVA ALTERNATOR PARTS

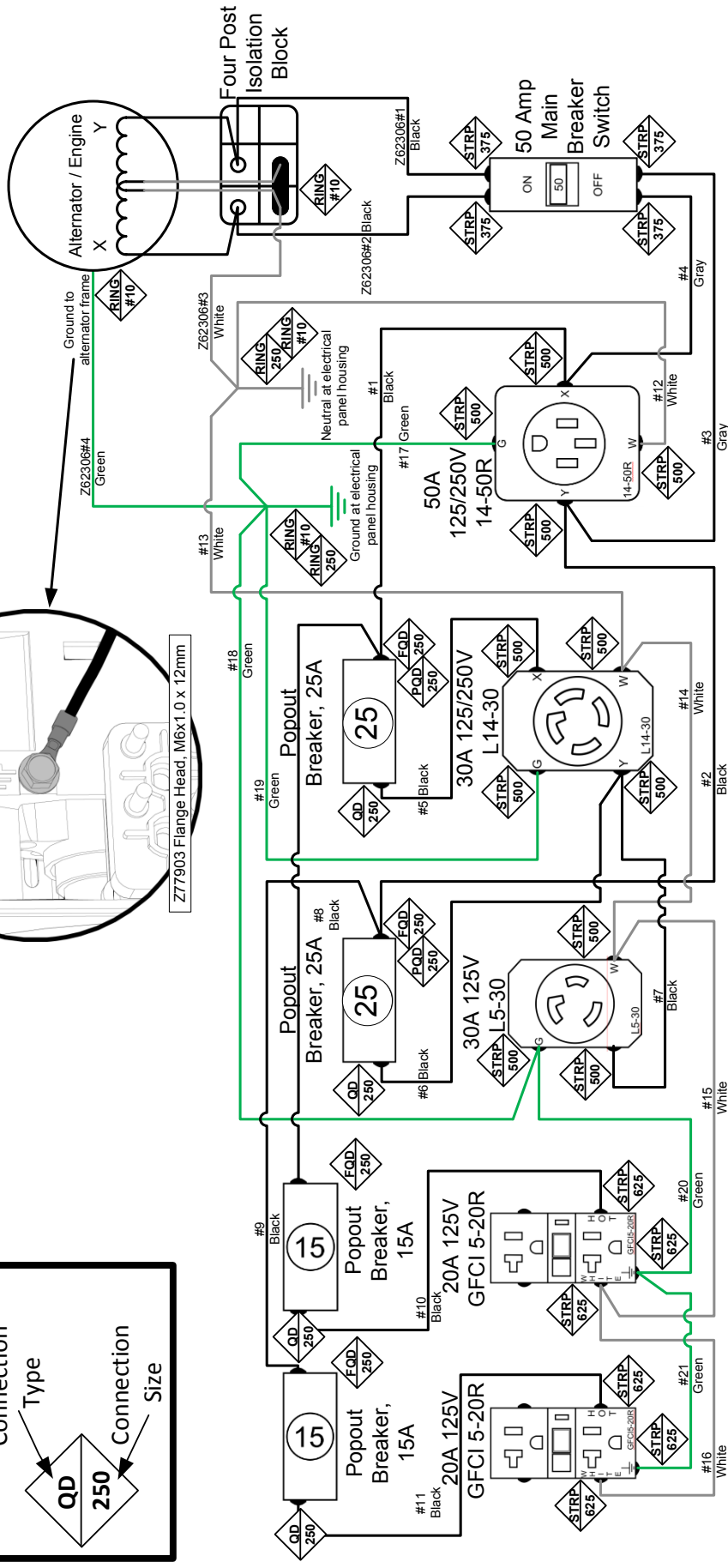
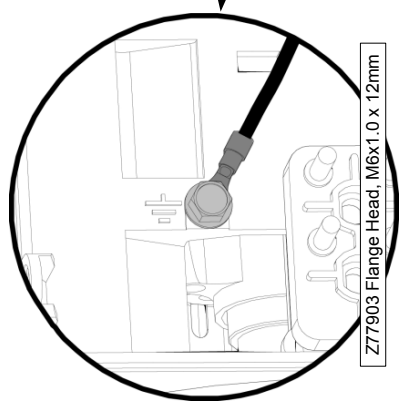
ITEM	PART NO.	Description	QTY.
1	0390100211	Fixing Ring	1
2	0390302511	Rear Bearing (6306-2RS)	1
3	0390501015	Terminal Box Lid	1
4	0390700009	Protection Screen	2
5	0390700011	Rear Screen	1
6	0390700306	Rubber - Cup	2
7	0391700143	Drive End Bracket	1
8	0392000033	Fan	1
9	9909505006	Securing Stud Cup	1
10	9909915060	Terminal Board	1
11	9910356050	Diode	2
12	9910384005	Varistor	2
13	GECAP31MF	Capacitor, 31.5MFZ	2
14	GESS262MM	Securing Stud	1
15	Z77159	Hex Bolt, M8x1.25x90mm	4
16	Z77251	Hex Nut, M8x1.25	4



Wiring Diagram

Connection Identification	
Connection Type	Sizes:
QD Male/Female Quick Disconnect	#6
SR Serrated Ring	#8
SSP Snap Spade	#10
FOD Flag Quik Disconnect	0.156"
PQD Piggy Back Quik Disconnect	0.250"
STRP Strip	0.313"
SPDE Spade	0.500"
RING Ring	0.625
HOOK Hook	0.750"
BLT Male/Female Bullet	
LT Lock Tab	

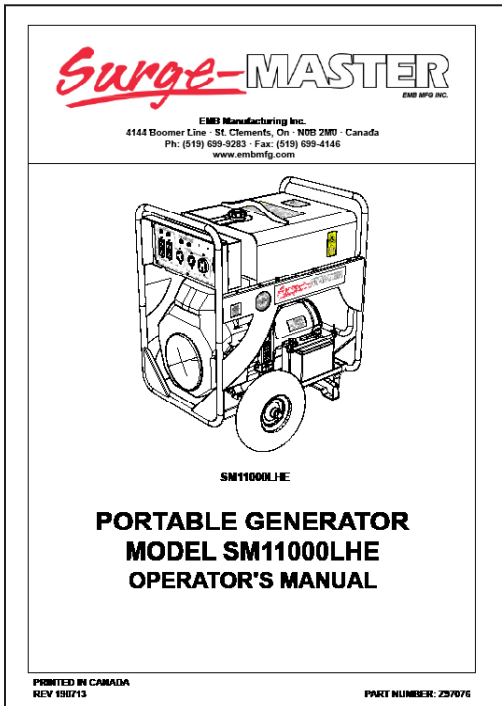
Connection Type	Connection Size
	250



Z62314 SM11000LHE Generator Bundle
Z62306 Alternator Connection Harness (For HUF - E)

View Facing Panel
Neutral Bonded to Frame

Accessories



**#Z97076
GENERATOR
OPERATOR'S MANUAL**

Available as a download at
www.surgemaster.ca