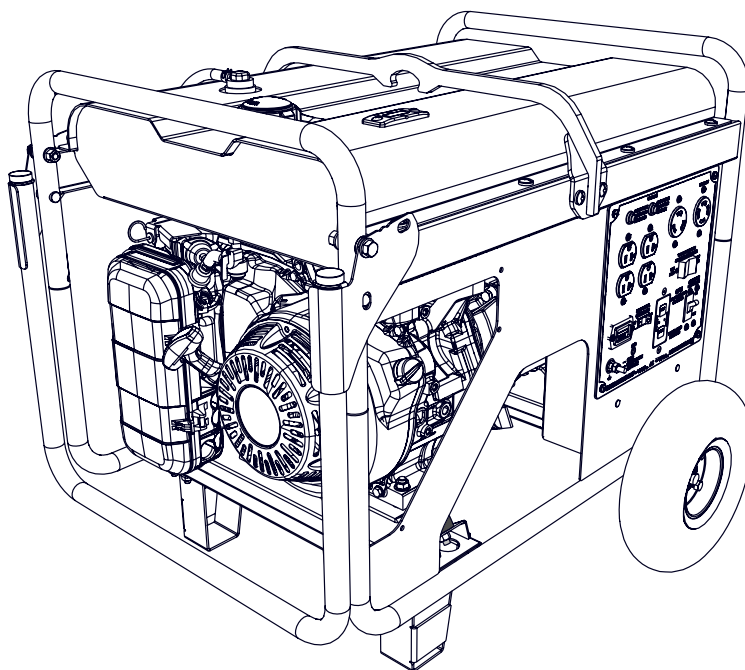




EMB Manufacturing Inc.  
4144 Boomer Line · St. Clements, On · N0B 2M0 · Canada  
Ph: (519) 699-9283 · Fax: (519) 699-4146  
www.embmfg.com

# WCS5000 / WCS5000R Generator Parts Manual

Starting with S/N's  
WCS5000 - 61000  
WCS5000R - 62000



Refer to the operators  
manual for safe  
operation and  
maintenance

## Foreword

EMB Mfg. 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 EMB 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 EMB Mfg. for information.

EMB reserves the right to alter specifications on their products at any time.

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For parts and information please contact your dealer. If your dealer is no longer available please go to our website: <http://www.embmfg.com> and click on "FIND A DEALER NEAR YOU" for information on a local dealer.

## Table of Contents

**Bolt Torque..... 4**  
**WCS5000 / WCS5000R Main Assembly..... 5**  
**Engine / Generator Assembly..... 6**  
**Frame Assembly ..... 7**  
**Electrical Panel Assembly ..... 8**  
**Fuel Tank Assembly & Fuel Lines..... 9**  
**Wiring Diagram..... 10**  
**Label Layout..... 11**  
**Accessories..... 12**

Alternator: Mecc Alte Inc. S16W-105/A Below are alternator parts available from Wallenstein. For other parts and maintenance or repair information please refer to the Mecc Alte alternator manual that shipped with the generator.			
1	Non Drive End Bracket	390302209	
2	Fan	392000015	
3	Rear Bearing 6203-2ZC3	390302521	
4	Diode	9910356050	
5	Varistor	9910384005	
6	Capacitor # :see chart below		
Find the value of the capacitor in your alternator, and match it to the list shown here for the correct order part number.		GECAP14MF	14 MF CAPACITOR
		GECAP16MF	16 MF Capacitor
		GECAP18MF	Capacitor, 18 MFZ
		GECAP20MF	Capacitor 20MFZ
		GECAP25MF	Capacitor 25MFZ
		GECAP31MF	Capacitor, 31.5 MFZ
		GECAP35MF	35 MF CAPACITOR
		GECAP40MF	40 MF CAPACITOR

Alternator maintenance should be performed by trained personnel only.



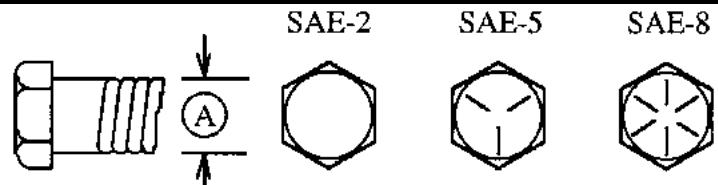
Exercise extreme caution when working with exposed wiring of the alternator, be aware that high voltage discharge of the capacitor is a danger.

**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.

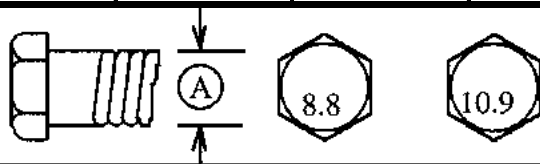
ENGLISH TORQUE SPECIFICATIONS						
Bolt Diameter "A"	Bolt Torque*					
	SAE 2 (N.m) (lb-ft)		SAE 5 (N.m) (lb-ft)		SAE 8 (N.m) (lb-ft)	
1/4"	8	6	12	9	17	12
5/16"	13	10	25	19	36	27
3/8"	27	20	45	33	63	45
7/16"	41	30	72	53	100	75
1/2"	61	45	110	80	155	115
9/16"	95	60	155	115	220	165
5/8"	128	95	215	160	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



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%.

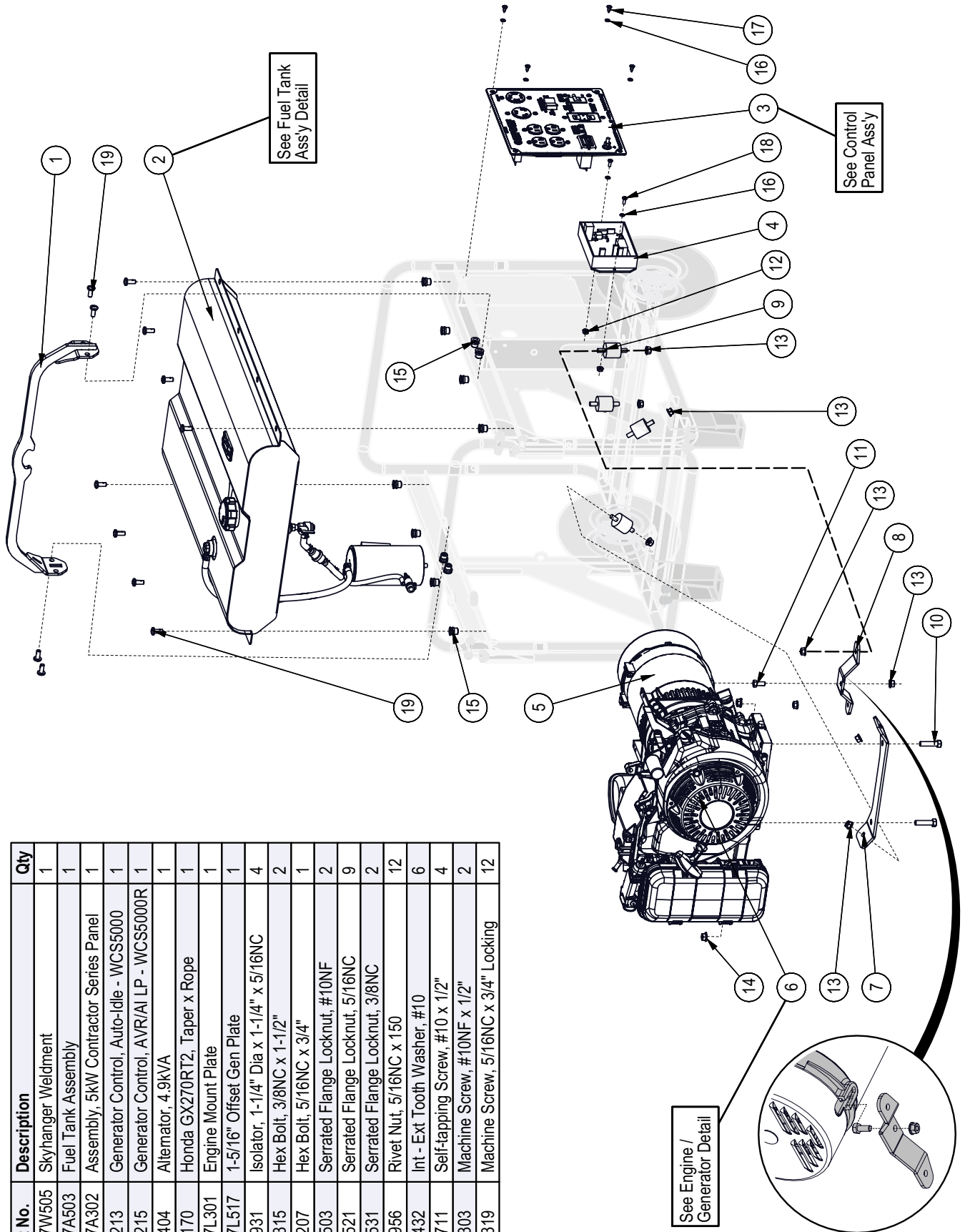
\* Torque value for bolts and capscrews are identified by their head markings.

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



**WCS5000 Main Assembly**

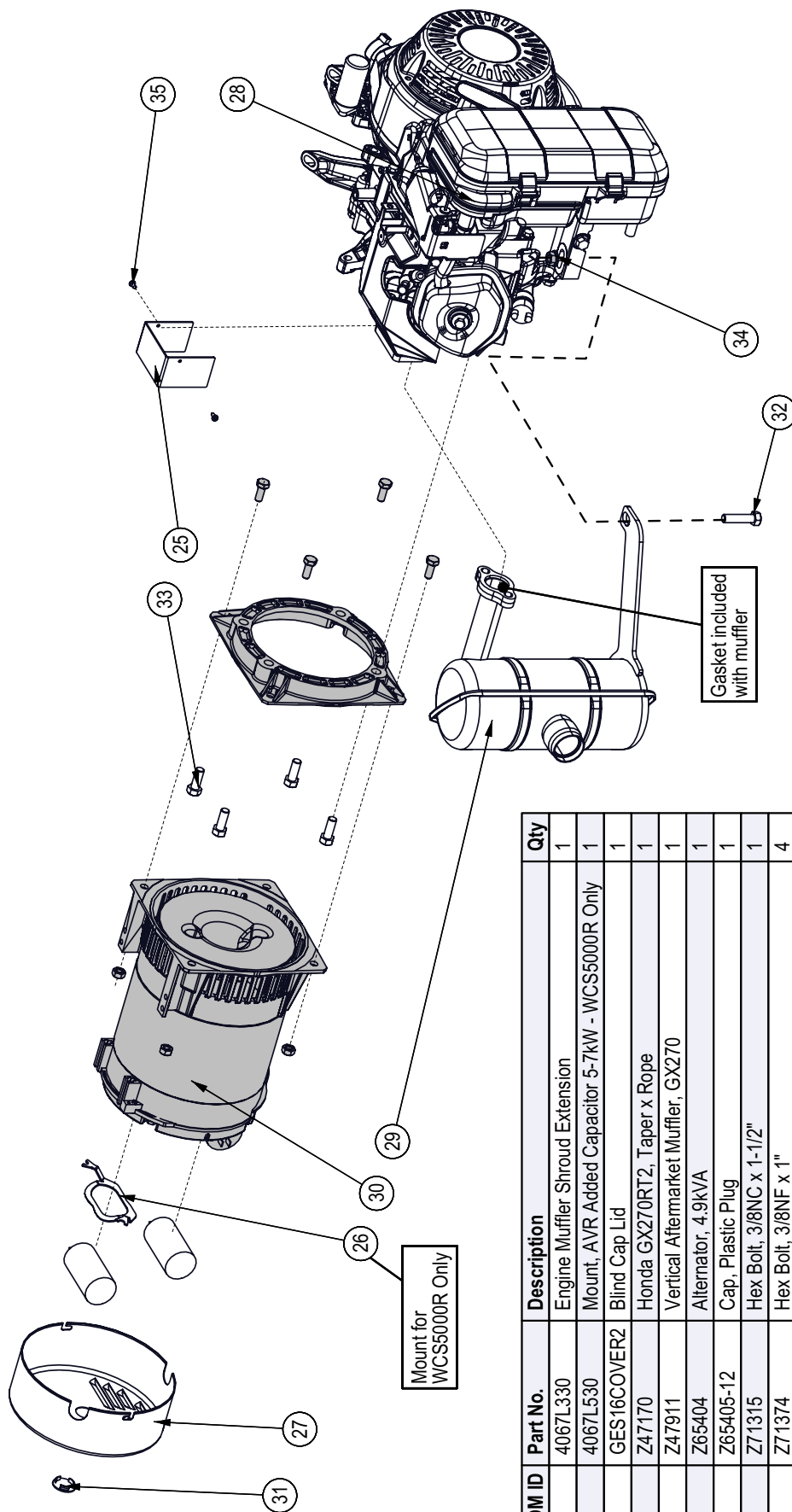
BOM ID	Part No.	Description	Qty
1	4067W505	Skyhanger Weldment	1
2	4067A503	Fuel Tank Assembly	1
3	4067A302	Assembly, 5kW Contractor Series Panel	1
4	Z66213	Generator Control, Auto-Idle - WCS5000	1
5	Z66215	Generator Control, AVR/AI LP - WCS5000R	1
6	Z65404	Alternator, 4.9kVA	1
7	Z47170	Honda GX270RT2, Taper x Rope	1
8	4067L301	Engine Mount Plate	1
9	4067L517	1-5/16" Offset Gen Plate	1
10	Z79931	Isolator, 1-1/4" Dia x 1-1/4" x 5/16NC	4
11	Z71315	Hex Bolt, 3/8NC x 1-1/2"	2
12	Z71207	Hex Bolt, 5/16NC x 3/4"	1
13	Z72503	Serrated Flange Locknut, #10NF	2
14	Z72521	Serrated Flange Locknut, 5/16NC	9
15	Z72531	Serrated Flange Locknut, 3/8NC	2
16	Z72956	Rivet Nut, 5/16NC x 150	12
17	Z73432	Int - Ext Tooth Washer, #10	6
18	Z76711	Self-tapping Screw, #10 x 1/2"	4
19	Z78303	Machine Screw, #10NF x 1/2"	2
	Z78319	Machine Screw, 5/16NC x 3/4" Locking	12



**Engine / Alternator Assembly**

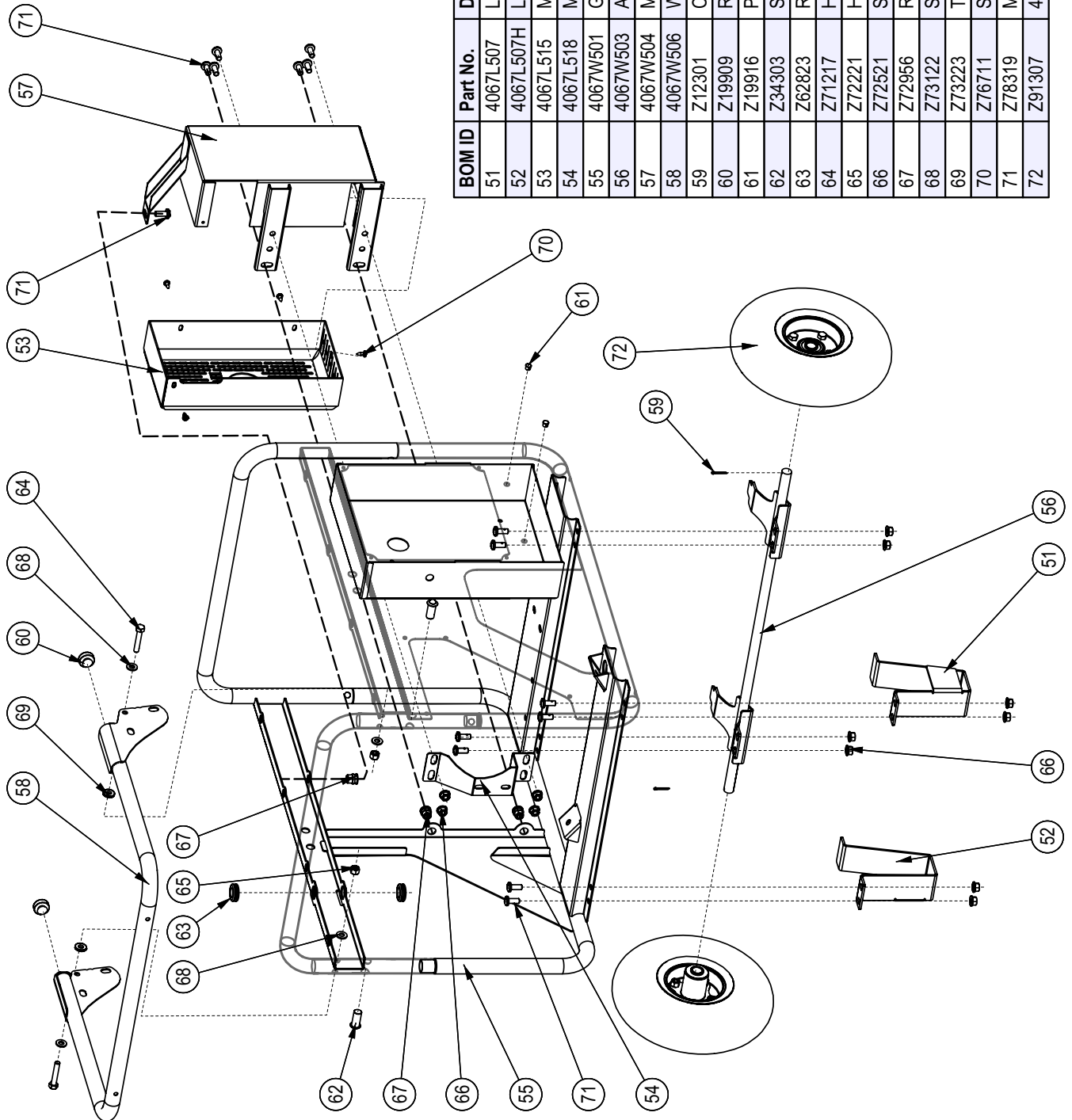
Alternator:  
**Mecc Alte Inc. S16W-105/A**  
 See parts chart page 3  
 For maintenance or repair information please refer to the Mecc-Alte alternator manual that shipped with the generator.

Engine:  
**Honda GX270RT2, Taper x Rope**  
 For maintenance or repair information please refer to the Honda Engine manual that shipped with the generator.



BOM ID	Part No.	Description	Qty
25	4067L330	Engine Muffler Shroud Extension	1
26	4067L530	Mount, AVR Added Capacitor 5-7kW - WCS5000R Only	1
27	GES16COVER2	Blind Cap Lid	1
28	Z47170	Honda GX270RT2, Taper x Rope	1
29	Z47911	Vertical Aftermarket Muffler, GX270	1
30	Z65404	Alternator, 4.9kVA	1
31	Z65405-12	Cap, Plastic Plug	1
32	Z71315	Hex Bolt, 3/8NC x 1-1/2"	1
33	Z71374	Hex Bolt, 3/8NF x 1"	4
34	Z72531	Serrated Flange Locknut, 3/8NC	1
35	Z76715	Self-tapping Screw, #6 x 3/8"	2

**Frame Assembly**

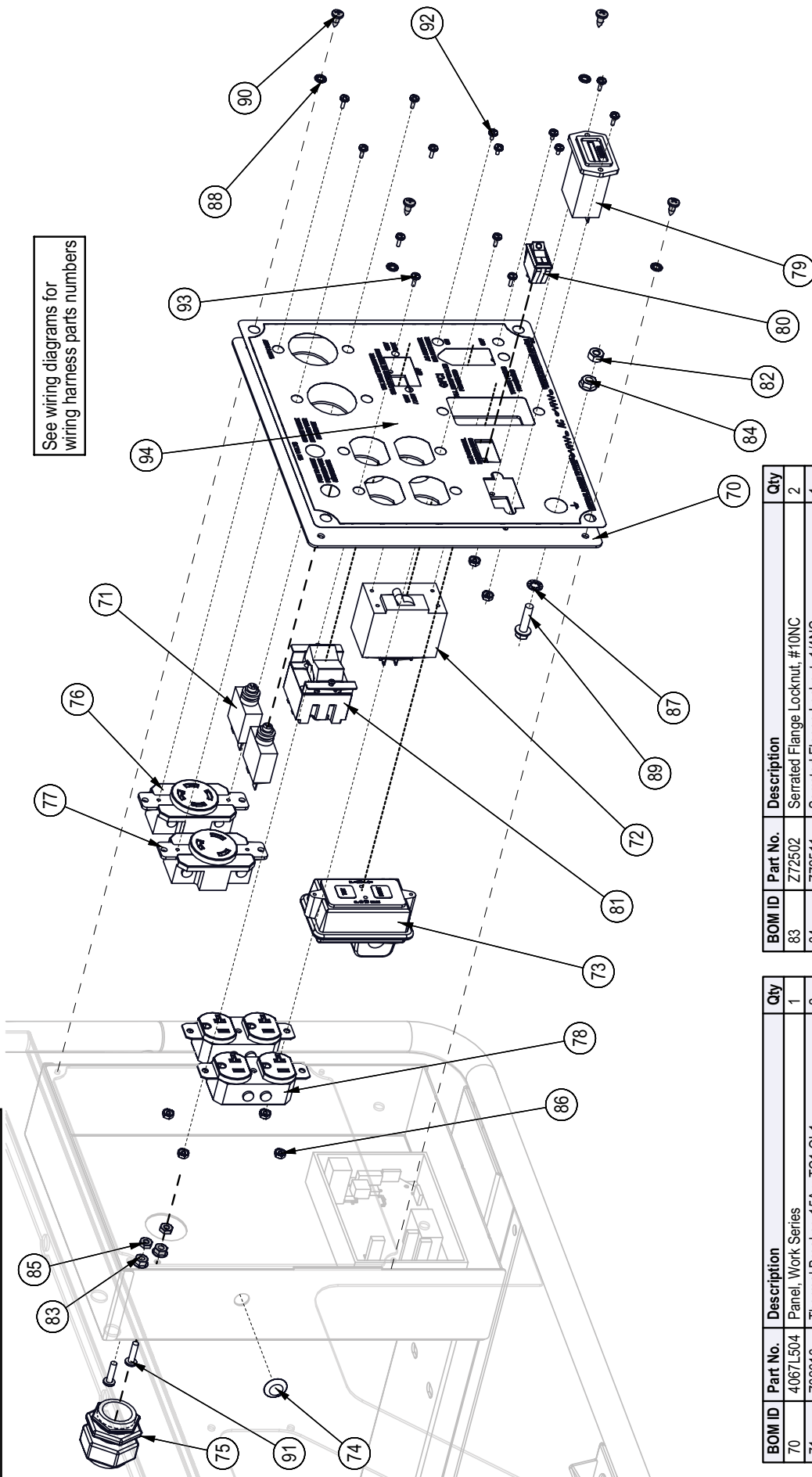


BOM ID	Part No.	Description	Qty
51	4067L507	Leg, Med Frame RH	1
52	4067L507H	Leg, Med Frame LH	1
53	4067L515	Muffer Cover	1
54	4067L518	Mount, Carbon Canister	1
55	4067W501	Generator Standard Mid-Frame	1
56	4067W503	Axle Weldment	1
57	4067W504	Muffer Backing Weldment	1
58	4067W506	Weldment, Handle	1
59	Z12301	Cotter Pin, 3/32" x 3/4"	2
60	Z19909	Rubber Bumper, 7/16" x 1"	2
61	Z19916	Plastic Hole Plug, 5/16" ID	2
62	Z34303	Spring Plunger, 1/2" Press x 1.1" x 18 lbs	2
63	Z62823	Rubber Grommet, 5/8" x 1/8"	2
64	Z71217	Hex Bolt, 5/16NC x 1-3/4"	2
65	Z72221	Hex Lock Nut, 5/16NC	10
66	Z72521	Serrated Flange Locknut, 5/16NC	12
67	Z72956	Rivet Nut, 5/16NC x 150	3
68	Z73122	SAE Washer, 5/16"	4
69	Z73223	Thick Washer, 5/16 x 0.125"	2
70	Z76711	Self-tapping Screw, #10 x 1/2"	4
71	Z78319	Machine Screw, 5/16NC x 3/4" Locking	15
72	Z91307	4-10-3.50-4NHS LRB 300lbs Stud FF x 5/8"	2



**Electrical Panel Assembly**

See wiring diagrams for wiring harness parts numbers

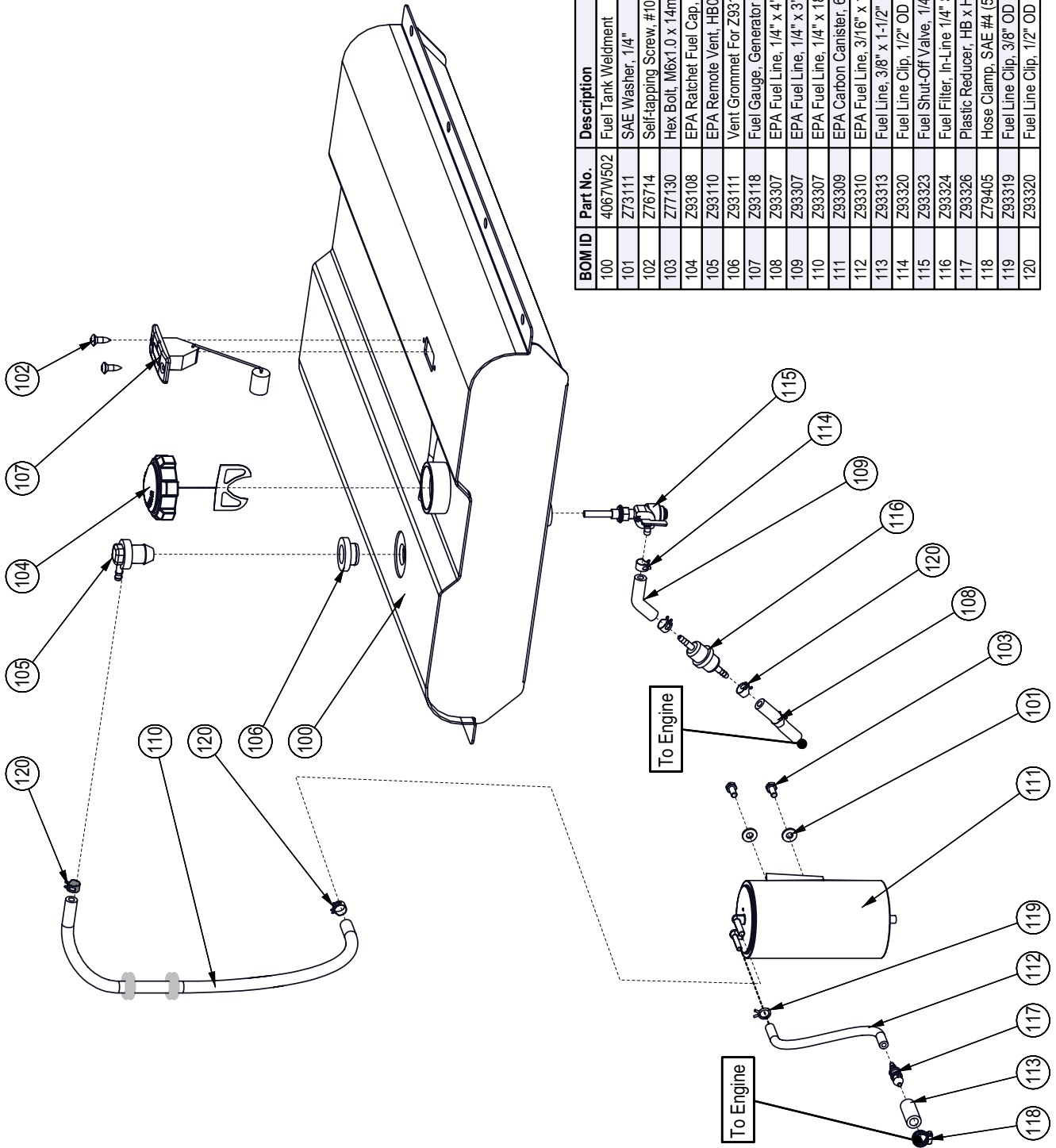


BOM ID	Part No.	Description	Qty
83	Z72502	Serrated Flange Locknut, #10NC	2
84	Z72511	Serrated Flange Locknut, 1/4NC	1
85	Z72751	Machine Nut, #10NC	2
86	Z72942	Serrated Washer Nut, #6NC	6
87	Z73431	Int - Ext Tooth Washer, 1/4"	1
88	Z73432	Int - Ext Tooth Washer, #10	4
89	Z76114	Flange Bolt, 1/4NC x 1"	1
90	Z76711	Self-tapping Screw, #10 x 1/2"	4
91	Z78305	Machine Screw, #10NC x 3/4"	2
92	Z78320	SEMS Screw, #6NC x 1/4" x External Tooth	4
93	Z78323	SEMS Screw, #6NC x 3/8" x External Tooth	10
94	Z94801	5-7 GFI/AVR Control Panel Decal - WCS5000	1
	Z94820	5-7 GFI/AVR Control Panel Decal - WCS5000R	1

BOM ID	Part No.	Description	Qty
70	4067L504	Panel, Work Series	1
71	Z62616	Thermal Breaker, 15A x TC1 OL-1	2
72	Z62664	18A - Double Breaker - Aux	1
73	Z62671	GFCI Module - PGFM	1
74	Z62813	Plug, #18	1
75	Z62827	Cable Gland, 18-25mm	1
76	Z63403	Receptacle, L14-30 x 30A x 125/250V	1
77	Z63404	Receptacle, L5-30 x 30A x 125V	1
78	Z63406	Receptacle, 5-20R x 20A x 125V	2
79	Z64611	Hour Meter, 10-80 VDC Quartz E-Mech Rectangular	1
80	Z66112	Rocker Switch, 20A SPST	1
81	Z66113	Rocker Switch, 3PDT	1
82	Z72111	Hex Nut, 1/4NC	1



**Fuel Tank Assembly & Fuel Lines**



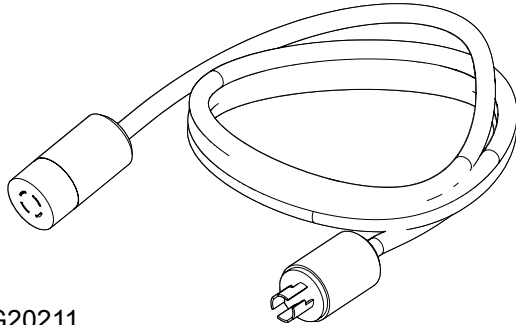
BOM ID	Part No.	Description	Qty
100	4067W502	Fuel Tank Weldment	1
101	Z73111	SAE Washer, 1/4"	2
102	Z76714	Self-tapping Screw, #10 x 1/2" Oval Head Countersunk - Black Zinc	2
103	Z77130	Hex Bolt, M6x1.0 x 14mm	2
104	Z93108	EPA Ratchet Fuel Cap, Unleaded Fuel x Unvented with Teether	1
105	Z93110	EPA Remote Vent, HB04	1
106	Z93111	Vent Grommet For Z93110	1
107	Z93118	Fuel Gauge, Generator	1
108	Z93307	EPA Fuel Line, 1/4" x 4"	1
109	Z93307	EPA Fuel Line, 1/4" x 3"	1
110	Z93307	EPA Fuel Line, 1/4" x 18"	1
111	Z93309	EPA Carbon Canister, 652cc	1
112	Z93310	EPA Fuel Line, 3/16" x 11"	1
113	Z93313	Fuel Line, 3/8" x 1-1/2"	1
114	Z93320	Fuel Line Clip, 1/2" OD Hose	2
115	Z93323	Fuel Shut-Off Valve, 1/4" Generator	1
116	Z93324	Fuel Filter, In-Line 1/4" Small	1
117	Z93326	Plastic Reducer, HB x HB 0604	1
118	Z79405	Hose Clamp, SAE #4 (5/8")	1
119	Z93319	Fuel Line Clip, 3/8" OD	1
120	Z93320	Fuel Line Clip, 1/2" OD Hose	4





**Accessories**

Call your dealer for pricing and availability



#G20211

Generator Extension cord, the right length and size, to make the most of your generator.

- Heavy Duty SJTW Cable
- -40° cold weather jacket
- Nema L14-30P 30a 125/250v Plug
- Nema L14-30R 30a 125/250v Connector
- Water & Flame Resistant
- UL, OSHA compliant

Available in three sizes.

G20211 • 10' Power Cord

G20212 • 20' Power Cord

G20213 • 25' Power Cord

**#Z97097 GENERATOR OPERATOR'S MANUAL**

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