

# Surge-MASTER

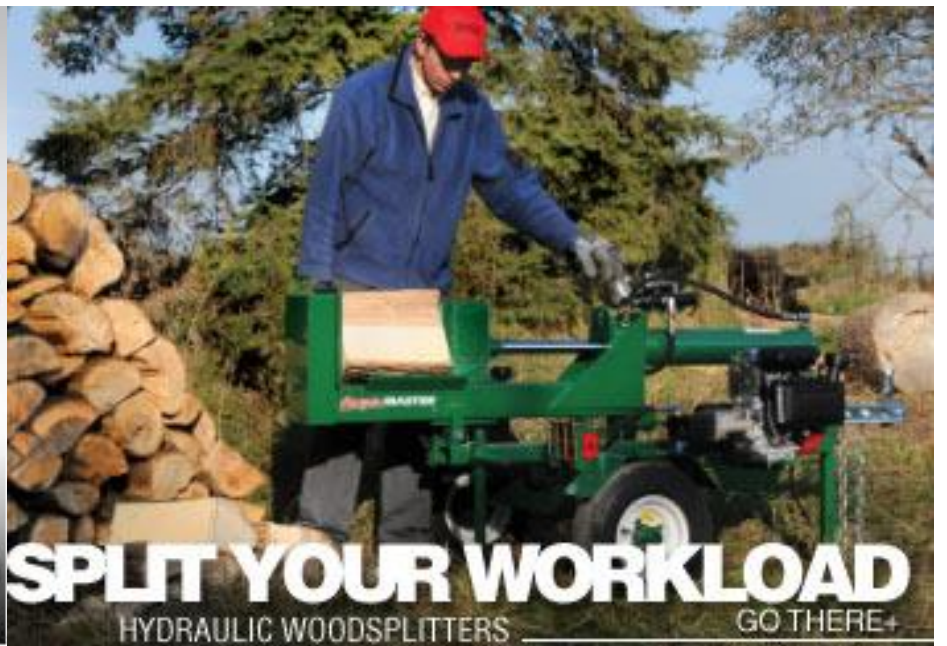
By EMB Manufacturing

Power  
Where You  
Need It.



**YARD CLEAN UP**  
CHIPPERS & CHIPPER/SHREDDERS

GO THERE+



## SpecBook 2016 Sales Specifications Reference

# **INTRODUCTION**

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## **The Purpose of This Book**

This book is intended as a reference aid for people selling or purchasing Surge-Master equipment. It is not intended to replace the catalogue, but it is intended to explain features and specifications which are outside the scope of the catalogue. It incorporates answers to the frequently asked questions we receive.

This book is not intended as a service or parts manual. However some of the information will be helpful in setting up and servicing your Surge-Master equipment.

## **How To Use This Book**

This book is divided into sections. There is 1 section for each of our product lines. The section page incorporates a list of each of the model designations and what they mean. Each section begins with helpful notes about features, specifications equipment matching and intended uses. This page also includes a section index.

Following the notes are charts showing the details on these features, specifications and equipment matching. At the bottom of most of the charts there is a line referring the reader to the appropriate helpful notes from the beginning of the section.

## **Disclaimer**

The information contained in this manual is current at the time of publishing.

EMB reserves the right to alter features and specifications at any time without prior notice.

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# Section 1

## ENGINES

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### Notes

- 1) EMB does not warranty the engines. The engine manufacturer does.
- 2) EMB does not supply engine parts.
- 3) Please read the included Engine Owner's Manual prior to operating engine-powered equipment. It is supplied by the engine manufacturer. Follow its direction for operation and maintenance.
- 4) Engines must be properly tuned and run at full throttle in (3600RPM) in order for the product to operate at maximum efficiency. The operator may try running the engine at partial throttle thinking it will conserve fuel, reducing noise, or extending engine life. However, this is counterproductive. It actually decrease efficiency and reduces component life.
- 5) Engines are preset by the manufacture and are not adjustable except for RPM. The exception to this is the generator engines, where throttles are locked in place.
- 6) Vertical shaft engines on Economy model splitters do not have adjustable throttles.
- 7) Horsepower ratings may change due to engine manufacturers rethinking their testing and advertising.
- 8) The most common cause of engine running problems, such as hunting and surging, is fuel. Either it is contaminated with water, dried flakes of stale fuel or other foreign material, or contains excess Ethanol. Fuel grade is not as important as age, where it is bought and how clean the container and the engine are when refilled. Maximum allowable Ethanol content according to most engine manufacturers is 10%. Either of these will cause lean running symptoms such as hunting and surging. The lean carburetion necessitated by modern emissions laws, along with lower quality fuel and Ethanol additives as well as the search for more power, means that the engines are more unforgiving than ever, particularly in cold temperatures when the air is denser and needs even more fuel to run properly. It is recommended to fill up using as clean container and/or a reputable high-volume filling station.
- 9) Currently, lean-running due to environmental regulations requires that engines be allowed to warm up for a while before they will accept throttle and load.
- 10) Proper storage procedures are essential
- 11) Engine manufacturers are silent on the use of synthetic oil.

## ENGINE SPECIFICATIONS

PRODUCT	MAKE	MODEL	DISPLACEMENT CC/ HP	SPECIFICATION #	STARTING R = RECOIL E = ELECTRIC	OIL MONITOR L = LEVEL P = PRESSURE
GENERATOR	HONDA	GC160	160 / 4.6	UAVXC	R	LEVEL SHUTOFF
		GX160	163 / 4.8	U1VX2	R	L SHUTOFF
		GX270	270 / 9.0	RT2VMT2	R	L SHUTOFF
		GX340	389 / 11.0	UVX16	R	L SHUTOFF
		GX390	389 / 13.0	RT2VC2	R & E	L SHUTOFF
		GX630	688 / 20.8	RVXE1	E	L SHUTOFF
		GX690	688 / 22.1	RHVE2	E	L SHUTOFF
	KOHLER	KD350	349 / 6.7	PAKD3504001A	R & E	P SHUTOFF
KUBOTA	OC95E3	416 / 9.4	EC95E3G1GX	E	P WARNING	
CHIPPER & CHIPPER - SHREDDER	HONDA	GX690	688 / 22.1	RHTXA	E	N
	SUBARU	SP/EX210	211 / 7.0	DT1031	R	N
SPLITTER	HONDA	GC160	160 / 5.0	LAQHC	R	N
		GCV160	160 / 5.0	LA0N5MF	R	N
	SUBARU	EA190V	189 / 5.8	50060	R	N
		SP/EX210	211 / 7.0	DT1031	R	N
SEE NOTES	1, 2, 3	6	4, 5, 7	-	-	-

## Section 2

# Chippers and Chipper-Shredders

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### CHIPPERS

SM424 Engine Drive Trailer Mounted Model

### CHIPPER-SHREDDERS

SM32S Engine Drive Cart Mounted Series

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## Notes

### **SM424GX**

- 1) Chippers are disc-type. Chipping knives are mounted to the face of the rotor, and use a ledger knife or anvil mounted in the housing.
- 2) Self-feed chippers are NOT convertible to roller feed.
- 3) Centrifugal clutches use friction pads which are pushed outwards by centrifugal force as RPM increases until they engage the housing, turning the pulley. Springs pull them back to resting position when RPM falls. They must be run at full engine RPM to avoid damage.
- 4) SM424GX features a 2-position adjustable length tongue.
- 5) It is recommend that the operator run a chipper or chipper-shredder a few moments before shutting it down in order to clear out any wood or woodchips that could jam it upon startup.
- 6) Rotor knives are reversible and can be sharpened. They can be sharpened until the trailing edge of the bevel (short side) is flush with the rotor surface.
- 7) Ledger knives have 4 useable edges. They can be flipped/reversed 3 times.
- 8) Engine-driven models must be properly tuned and run at full RPM (3600).
- 9) SM424 includes fenders , lights, a 17-digit VIN , a NVIS form for registration , and axle suspension.

### **(B) SM32S**

- 1) SM32S: “S” means Screen. The chips are held in by a screen in the bottom of the housing. There are cut repeatedly by the shredder knives until they are fine enough to fall through the screen to the ground below, where they are kept together by the nose housing. There are 2 optional screens available in addition to the standard one to change the chip sizes.
- 2) Chipper-Shredders use a 2-section welded rotor in a 2-chambered housing. The chipping section is identical to the chippers, and feeds from the rear or the side. The shredding section consists of 3 rows of flail knives, and feeds from the top. It is critical to keep to the size limit on the shredder section. If required, larger prices can be chipped in the chipper section, and then the chips can be fed into the shredder
- 3) Brake Clutches are engaged by balls running in decreasing-depth ramps. When disengaged, springs hold brake friction pads engaged, so that the rotor cannot turn, and springs hold the clutch friction pads disengaged so that the motor can turn freely. When engaged, the brake is disengaged and the clutch is engaged. This arrangement causes the rotor to be stopped quickly once the he clutch is disengaged, for safety reasons.
- 4) SM32S includes a Garden Trailer Hitch with a flip-over stand which allows hooking up to a garden tractor.
- 5) Engine-driven models must be properly tuned and run at full RPM (3600)

- 6) Rotor knives are reversible and can be sharpened. They can be sharpened until the trailing edge of the bevel (short side) is flush with the rotor surface.
- 7) Ledger knives have 4 useable edges. They can be flipped/reversed 3 times.
- 8) Tires are foam filled.



## MODEL SPECIFICATIONS

MODEL	ENGINE E= ELECTRIC START	FUEL CAPACITY l	ROTOR DRIVE	ROTOR KNIFE	SHREDDER KNIFE	ROTOR SIZE/ WEIGHT In/lb	DISCHARGE HEIGHT in
SM424GX	HONDA GX690 E	25	CENTRIFUGAL + BELT	2X 6.5" FULL	N	25 X 0.5 / 74	67.25
SM32S	SUBARU SP/EX210	3.6	BELT + BRAKE CLUTCH	2X 2.5" SPLIT OFFSET	8	14 X 0.3125 / 28	0
SEE NOTES	A8, B8	-	A1, A3, B3	A6, A7, B6, B7	B2	-	B1

## TRAILERING

MODEL	WHEEL SIZE	HITCH / ADJUSTABLE TONGUE	FENDERS	LIGHTS	SUSPENSION	BRAKES	WHEEL TRACK in	GROUND CLEARANCE In
SM424	4.80-8 LRB	2" BALL / Y	Y	Y	TORFLEX	N	52.125	6.375
BXMC32S	4.10X3.5 NHS	N	N	N	N	N	N	N
SEE NOTES	B8	A4, B4	A9	A9	A9	-	-	-

# Section 3

## GENERATORS

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### SH Emergency Power Series

- SHC Compact Models
- SHS Standard Models
- 5000W to 7000W WS Standard Models feature Auto-Idle and Full Power Switch
- SHS Heavy Duty Models featuring Auto-Idle
- SHS-R Models featuring AVR

### SC Contractor Ready Series

- SCC Compact Models featuring GFCI Outlets
- SCS Standard Models featuring Full Panel GFCI
- 5000W to 7000W WCS Standard Models feature Auto-Idle and Full Power Switch
- SCS Heavy Duty Models featuring Auto-Idle and Full Panel GFCI
- SCS-R Models featuring AVR

### Specialty Series

- SMDK Diesel Engine Models featuring Full Power Switch and Load Monitor
- SMWDC Welder-Generator Models featuring DC welding output for SMAW.

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## Notes

### **(A) ALTERNATORS**

- 1) Generators are 1 Phase, 60Hz, Sine Wave, Copper Wound, and Brushless.
- 2) Voltage regulation is via capacitor
- 3) Alternator output is within the allowable variation of +/-5% frequency, +/-10% voltage.
- 4) All neutrals and grounds are bonded to frame.
- 5) AVR (Automatic Voltage Regulation), if equipped, is accomplished by wiring in added capacitors.
- 6) Voltage and frequency output will vary with engine RPM and load. No-load voltage is set high to allow for the reduced engine RPM and voltage under load.
- 7) AVR does not affect THD.
- 8) Auto-Idle senses current passing through the neutral wire and adjusts engine rpm: idle without current and full throttle with current.

### **(B) ENGINES**

- 1) Engine must be properly tuned and run at full throttle (3600 RPM). Throttles are locked in this position.
- 2) Generators are shipped without engine oil. Please see engine owner's manual for oil type and quantity.
- 3) Electric start models are shipped without battery. Batteries must be ordered separately, or sourced locally. Please see chart on page 31.
- 4) All generator engines feature an oil monitoring system. Gasoline engines monitor level. Diesel engines monitor pressure. All except the DK7300E will shut the engine down. The DK7300E operates a warning lamp only.
- 5) Diesel generators MUST be run at a minimum of half-load constantly. Otherwise, problems develop with poor running and excessive smoking (Wet Stacking).
- 6) The SMDK7300E Kubota engine features a glowplug to aid starting. The SMDK5000E does not.
- 7) Electric start engines on 5000W and 7000W models have recoil backup. Electric start engines on 7300W, 12KW and 14KW models do not have recoil backup.
- 8) Engines are shipped without oil. The oil is drained after testing.
- 9) We cannot recommend any modifications such as remote start or automatic start hookups

### **(C) INSTALLATION & USE**

- 1) Please determine wattage requirements of everything the generator will be required to run together at any time before purchasing.

- 2) For generators without AVR output fluctuations in Frequency and Voltage may make them unsuitable for electronics.
- 3) Generators with AVR are suitable for electronics, provided there are no heavy motor starting loads combined with the electronics.
- 4) Do not operate generators or welder-generators in a confined space, such as a truck toolbox cabinet, since this will prevent the unit from cooling properly
- 5) Diesel generators are not suitable for use as home backup, due to low/variable load demands (see B2).
- 6) Consult a licensed electrician for proper hookup when using as a home backup.
- 7) Bonded neutrals and grounds should only be used with transfer switches which switch neutral (3-pole) when used as home backup.
- 8) The Full Power Switch on Diesel generators reconfigures the alternator output wiring to a parallel circuit. This allows full wattage to be available at the 120V twist lock outlet. However, 240V is not available when Full Power is selected.

### **(C) SMWDC MODELS**

- 1) Welder-generators use brushes, and do not use capacitors.
- 2) Welders have a duty cycle of 50% at maximum amperage for welding. This means that the welder cannot be operated for more than 5 minutes out of 10 without overheating, which will trip the thermal breaker. The thermal breaker will reset itself once the unit has cooled down. The thermal breaker affects the welder use only, the outlets can still be used.
- 3) Welding output is DC, SMAW (Stick)
- 4) The electrical outlets cannot be used while welding

## Features

### EMERGENCY POWER SERIES

Model Wattage	OUTLETS (V)			BREAKERS (A)		Capacitor (mf) (ADDED)	FULL PANEL GFCI	AVR	FULL POWER SWITCH	AUTO IDLE
	120	240	120/240	MAIN	POPOUT					
<b>SHC Compact Models</b>										
<b>2500</b> 2400/2000	4X 5-20	N	N	N/A	1X 12	18	N	N	N	N
<b>3000</b> 2500/2100	4X 5-20	N	N	N/A	2X15	18	N	N	N	N
<b>5000</b> 5000/4250	2X 5-20	N	1X L14-30	N/A	2X 15	20	N	N	N	N
<b>SHS Standard Models</b>										
<b>3000</b> 2500/2100	2X 5-20 1X L5-30	N	N	15	N/A	18	N	N	N	N
<b>3000R</b> 2500/2100	2X 5-20 1X L5-30	N	N	15	N/A	18 12/10	N	Y	N	N
<b>5000</b> 5000/4250	4X 5-20 1X L5-30	N	1X L14-30	17.5	2X 15	20	N	N	Y	Y
<b>5000R</b> 4600/4250	4X 5-20 1X L5-30	N	1X L14-30	17.5	2X 15	20 14/14	N	Y	Y	Y
<b>7000</b> 6500/6250	4X 5-20 1X L5-30	N	1X L14-30	26	2X 15	31.5	N	N	Y	Y
<b>7000R</b> 6700/6250	4X 5-20 1X L5-30	N	1X L14-30	26	2X 15	31.5 16/20	N	Y	Y	Y
<b>SHS Heavy Duty Models</b>										
<b>12000</b> 12K/10K	4 X 5-20 1X L5-30	1X 6-50	1X L14-30 1X 14-50	42 30 SUB	2X 15	2X 31.5	N	N	N	Y
<b>12000R</b> 12.7K/10K	4 X 5-20 1X L5-30	1X 6-50	1X L14-30 1X 14-50	42 30 SUB	2X 15	2X 31.5 (40/40)	N	Y	N	Y
<b>14000</b> 12.8K/12K	4 X 5-20 1X L5-30	1X 6-50	1X L14-30 1X 14-50	50 30 SUB	2X 15	2X 40	N	N	N	Y
<b>14000R</b> 13.9K/12K	4 X 5-20 1X L5-30	1X 6-50	1X L14-30 1X 14-50	50 30 SUB	2X 15	2X40 (40- 20/40-14)	N	Y	N	Y
<b>SEE NOTES</b>	-	-	-	-	-	-	-	A5, A2, A7, C3	C8	A8

**CONTRACTOR-READY SERIES**

Model Wattage	OUTLETS (V)			BREAKERS (A)		Capacitor (mf) (ADDED)	FULL PANEL GFCI	AVR	FULL POWER SWITCH	AUTO IDLE
	120	240	120/240	MAIN	POPOUT					
<b>SCC Compact Models</b>										
<b>2500</b> 2400/2000	4X 5-20 GFCI	N	N	N	1X 12	18	N	N	N	N
<b>3000</b> 2500/2100	4X 5-20 GFCI	N	N	N	2X 15	18	N	N	N	N
<b>5000</b> 5000/4250	4X 5-20 GFCI	N	N	N	2X 15	20	N	N	N	N
<b>SCS Standard Models</b>										
<b>3000</b> 2500/2100	2X 5-20 1XL5-30	N	N	15	N	18	Y	N	N	N
<b>3000R</b> 2500/2100	2X 5-20 1XL5-30	N	N	15	N	18	Y	Y	N	N
<b>5000</b> 5000/4250	4X 5-20 1XL5-30	N	1X L14-30	17.5	2X 15A	20	Y	N	Y	Y
<b>5000R</b> 4600/4250	4X 5-20 1XL5-30	N	1X L14-30	17.5	2X 15A	20 (14/14)	Y	Y	Y	Y
<b>7000</b> 6500/6250	4X 5-20 1XL5-30	N	1X L14-30	26	2X 15A	31.5	Y	N	Y	Y
<b>7000R</b> 6700/6250	4X 5-20 1XL5-30	N	1X L14-30	26	2X 15A	31.5 (16/20)	Y	Y	Y	Y
<b>SCS Heavy Duty Models</b>										
<b>12000</b> 12K/10K	4 X 5-20 1X L5-30	1X 6-50	1X L14-30 1X 14-50	42 30 SUB	2X 15	2X 31.5	Y	N	N	Y
<b>12000R</b> 12.7K/10K	4 X 5-20 1X L5-30	1X 6-50	1X L14-30 1X 14-50	42 30 SUB	2X 15	2X 31.5	Y	Y	N	Y
<b>14000</b> 12.8K/12K	4 X 5-20 1X L5-30	1X 6-50	1X L14-30 1X 14-50	50A 30A SUB	2X 15	2X 40	Y	N	N	Y
<b>14000R</b> 13.9K/12K	4 X 5-20 1X L5-30	1X 6-50	1X L14-30 1X 14-50	50A 30A SUB	2X 15	2X 40 (40- 14/40-20)	Y	Y	N	Y
<b>SEE NOTES</b>	-	-	-	-	-	A5	-	A5, A2, A7, C3	C8	A8

**SPECIALTY SERIES**

Model Wattage	OUTLETS (V)			BREAKERS (A)		Capacitor (mf) (ADDED)	FULL PANEL GFCI	AVR	FULL POWER SWITCH	AUTO IDLE
	120	240	120/240	MAIN	POPOUT					
<b>SMDK Diesel Engine Series (Includes Load Monitor)</b>										
<b>5000E</b> 5000/3750	4X 5-20 GFCI 1X L5-30	N	1X L14-30	20	2X 15 1X 20	20	N	N	Y	N
<b>7300E</b> 7300/6000	4X 5-20 GFCI 1X L5-30	N	1X L14-30	30	2X 15 1X 20	31.5	N	N	Y	N
<b>SMWDC Welder-Generator Series (DC SMAW WELDING: MODEL # DENOTES MAXIMUM WELDING AMPERAGE)</b>										
<b>160</b> 3500/3000	2X 5-20 GFCI	N	1X L14-30	N	2X 15	N	N	N	N	N
<b>190E</b> 3500/3000	2X 5-20 GFCI	N	1X L14-30	N	2X 15	N	N	N	N	N
<b>190EA</b> 3500/3000	2X 5-20 GFCI	N	1X L14-30	N	2X 15	N	N	N	N	Y
<b>NOTES</b>	C2, C3, C4	-	-	-	-	A5	-	A5, A2, A7, C3	C8	A8

**NEMA RECEPTACLE CODES USED**

120V	240V	120/240V
5-20 = 20A T-slot	6-50 = 50A Welder	L14-30 = 30A Twist-Lock
5-20 GFCI = 20A T-slot GFCI	-	14-50 = 50A Stove/Dryer
L5-30 = 30A Twist-Lock	-	-

## PERFORMANCE

### EMERGENCY POWER SERIES

MODEL	ENGINE E=Electric Start	FUEL CAPACITY (l)	RUN TIME (HOURS)		NOISE LEVEL dB (A) @ 7M	THD %
			HALF LOAD	FULL LOAD		
<b>SHC Compact Models</b>						
<b>2500</b>	Honda GC160	1.8	2.75	2.25	68	<7.5
<b>3000</b>	Honda GX160	3.1	3.0	2.5	68	<7.5
<b>5000</b>	Honda GX270	6.0	4	3	70.5	<6
<b>SHS Standard Models</b>						
<b>3000/3000R</b>	Honda GX160	18.0	16.6	12.5	68	<7.5
<b>5000/5000R</b>	Honda GX270	26.0	12.3	9.1	70.5	<6
<b>7000/7000R</b>	Honda GX390 E	26.0	12.4	7.2	70.5	<6
<b>SHS Heavy Duty Models</b>						
<b>12000/12000R</b>	Honda GX630 E	46.0	10.2	6.8	77	<4
<b>14000/14000R</b>	Honda GX690 E	46.0	8.6	5.7	77	<4
<b>SEE NOTES</b>	A6, B1	-	-	-	-	-

### CONTRACTOR-READY SERIES

MODEL	ENGINE E=Electric Start	FUEL CAPACITY (l)	RUN TIME (HOURS)		NOISE LEVEL dB (A) @ 7M	THD %
			HALF LOAD	FULL LOAD		
<b>SCC Compact Models</b>						
<b>2500</b>	Honda GC160	1.8	2.75	2.25	68	<7.5
<b>3000</b>	Honda GX160	3.1	3.0	2.5	68	<7.5
<b>5000</b>	Honda GX270	6.0	4	3	70.5	<6
<b>SCS Standard Models</b>						
<b>3000/3000R</b>	Honda GX160	18	16.6	12.5	68	<7.5
<b>5000/5000R</b>	Honda GX270	26	12.3	9.1	70.5	<6
<b>7000/7000R</b>	Honda GX390 E	26	12.4	7.2	70.5	<6



**CONTRACTOR-READY SERIES CONTINUED**

MODEL	ENGINE E=Electric Start	FUEL CAPACITY(l)	RUN TIME (HOURS)		NOISE LEVEL dB (A) @ 7M	THD %
			HALF LOAD	FULL LOAD		
<b>WCS Heavy Duty Models</b>						
<b>12000/12000R</b>	Honda GX630 E	46	10.2	6.8	77	<4
<b>14000/14000R</b>	Honda GX690 E	46	8.6	5.7	77	<4
<b>SEE NOTES</b>	A2, A7, B1, B2, B8	-	-	-	-	A7

**SPECIALTY SERIES**

MODEL	ENGINE E=Electric Start	FUEL CAPACITY (l)	RUN TIME (HOURS)		NOISE LEVEL dB (A) @ 7M	THD %
<b>DK Diesel Engine Series</b>						
<b>5000E</b>	Kohler KD350 E	20	22	14	77	<6
<b>7300E</b>	Kubota OC95 E	20	16	9	77	<6
<b>WDC Welder-Generator Series</b>						
<b>160</b>	Honda GX340	6.1	4	3	70.5	N/A
<b>190E</b>	Honda GX390 E	6.1	3.5	2.75	70.5	N/A
<b>190EA</b>	Honda GX390 E	15.5	15.5	7	70..5	N/A
<b>SEE NOTES</b>	A2, A7, B1, B2, B2, B3 B4,B5, B6, B8	-	-	-	-	A7

**BATTERY SIZES FOR ELECTRIC-START MODELS**

GENERATOR/ENGINE TYPE	BATTERY GROUP SIZE	VOLTAGE	CCA / AH
<b>7000W GAS</b>	U1 (LAWN & GARDEN)	12	250 / 18-30
<b>12000W GAS</b>	U1 (LAWN & GARDEN)	12	250 / 36
<b>14000W GAS</b>	U1 (LAWN & GARDEN)	12	250 / 36
<b>5000W DIESEL</b>	U1 (LAWN & GARDEN)	12	250 / 44
<b>7300W DIESEL</b>	U1 (LAWN & GARDEN)	12	250 / 36-48
<b>WELDER-GENERATOR</b>	U1 (LAWN & GARDEN)	12	250 / 18-30
<b>SEE NOTES</b>	B3	-	-

## Section 4

# SPLITTERS

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### **SE ECONOMY 20 TON TRAILER MOUNT WOODSPLITTER SERIES**

- **SE50 HORIZONTAL SUBARU ENGINE-POWERED MODEL**
- **SE60 HORIZONTAL-VERTICAL SUBARU ENGINE-POWERED MODEL**
- **SE80 HORIZONTAL-VERTICAL TRAILER MOUNT HONDA ENGINE-POWERED MODEL**

### **26 SERIES 20 TONTRAILER MOUNT SERIES**

- **26LGC-L HOIZONTAL HONDA ENGINE-POWERED MODELS WITH LIGHTS**
- **26HVGC-L HOIZONTAL-VERTICAL HONDA ENGINE-POWERED MODELS WITH LIGHTS**

### **SL600 25 TON TRAILER MOUNT MODELS**

- **SL606S HORIZONTAL-VERTICAL SUBARU ENGINE-POWERED MODEL**

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## Notes

### **(A) ENGINES**

- 1) Engine must be properly tuned and run at full throttle (3600RPM).
- 2) Vertical shaft engines (SE series) do not have adjustable throttles, they are at full throttle at all times
- 3) Splitter engines do NOT have oil monitor system.
- 4) Splitter engines are recoil start only.

### **(B) COMMON**

- 1) Assembly hardware is shipped in manual tube.
- 2) Choose splitter tonnage by the type of wood being split. Most woods, particularly straight-grained ones, can be split by a 20-ton splitter, whereas particularly knotty and twisted-grained woods may require a 31 ton splitter.
- 3) Splitter valves feature spring-center on forward. This means that when the handle is released a spring returns the lever to the neutral position so that the cylinder stops moving. They also feature a detent on the reverse. This means that when the handle is moved back to retract the cylinder, it is held in place by a spring, balls and a groove inside the valve. When the cylinder is fully retracted. Pressure buildup inside the valve and disengages the detent and the spring returns the lever to neutral. The hydraulic system pressure relief is incorporated into the splitter valve.
- 4) Cylinders are rebuildable. The end cap threads in using a RH thread
- 5) The maximum recommended split diameter is twice the wedge height.
- 6) Splitters use Dexron3 or 4 ATF as hydraulic fluid.
- 7) Engine-driven splitters feature 2-stage pumps, basically 2 gear pumps in 1 body. Stage 1 is High Volume Low Pressure (HVLP). Its purpose is to move the cylinder quickly when speed is more important than pressure. Stage 2 is High Pressure Low Volume (HPLV). Its purpose is to supply splitting pressure, when pressure is more important than speed. When extending the cylinder to the wood being split, both stages work together to move the cylinder quickly. When the wedge hits the wood, pressure inside the valve causes a checkvalve to close and an unloader valve to open, redirecting all fluid flow through stage 2 to provide splitting pressure. Hydraulic pumps do not have a pressure relief valve.
- 8) WE models are NOT recommended for commercial use.
- 9) 26LGC-L, 26HVGCC-L and SL606S include highway lighting, NVIS form and 17 digit serial numbers for road registration.

## MECHANICAL SPECIFICATIONS

MODEL	ENGINE	TYPE	CYLINDER SIZE in	SPLIT FORCE ton	SPLIT LENGTH in	CYCLE TIME AVG/FULL sec	WEDGE HEIGHT in	BED HEIGHT in
<b>SE SERIES</b>								
SE50	SUBARU EA190	HORIZONTAL	4.0 X 1.25	20	24	6.62 / 13.24	9	24
SE60	SUBARU EA190	HORIZONTAL VERTICAL	4.0 X 1.25	20	24	6.62 / 13.24	9	31.5
SE80	HONDA GCV160	HORIZONTAL VERTICAL	4.0 X 1.25	20	24	6.62 / 13.24	9	31.5
<b>26 SERIES</b>								
26LGC-L	HONDA GC160	HORIZONTAL	4.0 X 1.25	20	24	6.62 / 13.24	9	19
26HVGC-L	HONDA GC160	HORIZONTAL VERTICAL	4.0 X 1.25	20	24	6.62 / 13.24	9	24
<b>SL600 SERIES</b>								
SL606S	SUBARU SP210	HORIZONTAL VERTICAL	4.5 X 24	25	24	7.62 / 15.24	10	27
SEE NOTES	A1, A2, A3, A4	B8	B4	B2	-	-	A5	-

## HYDRAULIC SPECIFICATIONS

MODEL	PUMP TYPE STAGE@gpm	STAGE 1		STAGE 2		RELIEF SETTING psi	TANK CAPACITY l	RETURN FILTER TYPE
		PRESSUREpsi	FLOW gpm	PRESSUREpsi	FLOW gpm			
<b>SE SERIES</b>								
SE ALL	2 @11	500	8	3000	3	3000	11	SPIN-ON
<b>26 SERIES</b>								
26 ALL	2 @11	500	8	3000	3	3000	13	SPIN-ON
<b>26 SERIES</b>								
SL606S	2 @11	500	8	3000	3	3000	12	SPIN-ON
SEE NOTES	B3	-	-	-	-	B7	B6	-

## TRAILERING

MODEL	WHEEL SIZE	HITCH	FENDERS	LIGHTS	SUSPENSION	BRAKES	WHEEL TRACK in	GROUND CLEARANCE
<b>SE SERIES</b>								
<b>SE ALL</b>	4.80-8LRB	2" BALL	N	N	N	N	34	7
<b>26 SERIES</b>								
<b>26LGC-L</b>	4.80-8LRB	2" BALL	Y	Y	N	N	34.0	7.0
<b>26HVGC-L</b>	4.80-8LRB	2" BALL	Y	Y	N	N	42.0	7.25
<b>SL600 SERIES</b>								
<b>SL606S</b>	4.80-8LRB	2" BALL	Y	Y	N	N	42.0	7.0
<b>WX540</b>	4.80-8LRB	2" BALL	Y	Y	N	N	42.0	7.25
<b>SEE NOTES</b>	-	-	B9	B9	-	-	-	-

**EMB MANUFACTURING INC.**

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