

## TECHNICAL SPECIFICATIONS - BULLDOG™ 5500 K2708-2

INPUT - GASOLINE ENGINE					
<u>Manufacturer</u>	<u>Description</u>	<u>Speed</u>	<u>Displacement</u>	<u>Ignition</u>	<u>Capacities</u>
Kohler CH395	1 cyl., 4 cycle air-cooled gasoline 8.9 HP @ 3600 RPM <sup>(1)</sup> Aluminum Block with Cast Iron Sleeve	3750 RPM ± 100 RPM at no load	16.9 cu. in. (277 cc)	Manual, Recoil start; Manual choke	Fuel: 1.9 gal. (7.2 L)
			<b>Bore x Stroke</b> 3.1" x 2.3" (78mm x 58mm)		Oil: 1.2 qts.(1.1 L)
RATED OUTPUT - WELDER					
<u>Duty Cycle</u>		<u>Amps AC</u>		<u>Volts at Rated Amperes</u>	
30% Duty Cycle		125 Amps AC Constant Current		20 VAC	
60% Duty Cycle		100 Amps AC Constant Current		25 VAC	
OUTPUT - WELDER AND GENERATOR					
<u>Welding Ranges</u>	<u>Welder Open Circuit Voltage</u>		<u>AC Auxiliary Power</u>		
70 - 140 Amps AC	66 VAC Max.		4000 Continuous Watts 5500 Surge Watts		
PHYSICAL DIMENSIONS					
<u>Height</u>	<u>Width</u>	<u>Depth</u>	<u>Weight</u>		
25.62 in. 651 mm	21.77 in. 553 mm	31.48 in. 800 mm	198.0 lb. 89.8 kg		

<sup>(1)</sup>Kohler also rates the engine at 9.5 HP@ 4000 RPM

## SAFETY PRECAUTIONS

Read this entire installation section before you start installation.



### WARNING

Do not attempt to use this equipment until you have thoroughly read all the operation and maintenance manuals supplied with your machine. They include important safety precautions; detailed engine starting, operating, and maintenance instructions; and parts lists.

#### ELECTRIC SHOCK can kill.



- Do not touch electrically live parts or electrodes with your skin or wet clothing.
- Insulate yourself from the work and ground.

• Always wear dry insulating gloves.

#### ENGINE EXHAUST can kill.



- Use in open, well ventilated areas or vent exhaust to the outside.
- Do not stack anything on or near the engine.

#### MOVING PARTS can injure.



- Do not operate this equipment with any of its doors open or guards off.
- Stop the engine before servicing it.

• Keep away from moving parts.

Only qualified personnel should install, use, or service this equipment.

## LOCATION AND VENTILATION

Whenever you use the BULLDOG™ 5500, be sure that clean cooling air can flow through the machine's gasoline engine and the generator. Avoid dusty, dirty areas. Also, keep the machine away from heat sources. Do not place the back end of the generator anywhere near hot engine exhaust from another machine. And of course, make sure that engine exhaust is ventilated to an open, outside area.

The BULLDOG™ 5500 must be used outdoors. Do not set the machine in puddles or otherwise submerge it in water. Such practices pose safety hazards and cause improper operation and corrosion of parts.

Always operate the BULLDOG™ 5500 with the case roof on and all machine components completely assembled. This will protect you from the dangers of moving parts, hot metal surfaces, and live electrical devices.

## STORING

1. Store the machine in a cool, dry place when it's not in use. Protect it from dust and dirt. Keep it where it can't be accidentally damaged from construction activities, moving vehicles, and other hazards.
2. If you will be storing the machine for over 30 days, you should drain the fuel to protect fuel system and carburetor parts from gum deposits. Empty all fuel from the tank and run the engine until it stops from lack of fuel.
3. You can store the machine for up to 24 months if you use a gasoline stabilizing additive in the fuel system. Mix the additive with the fuel in the tank and run the engine for a short time to circulate the additive through the carburetor.
4. While the engine is still warm, drain the oil and refill with fresh oil per the engine manual.
5. Remove the spark plug and pour approximately 1/2 ounce (15 ml) of engine oil into the cylinder. Replace the spark plug and crank the engine slowly to distribute the oil.
6. Clean any dirt and debris from the cylinder and cylinder head fins and housing, rotating screen, and muffler areas.
7. Store in a clean, dry area.

**STACKING**

BULLDOG™ 5500 machines CANNOT be stacked.

**TILTING**

Place the machine on a secure, level surface whenever you use it or store it. Any surfaces you place it on other than the ground must be firm, non-skid, and structurally sound.

The gasoline engine is designed to run in a level position for best performance. It can operate at an angle, but this should never be more than 15 degrees in any direction. If you do operate it at a slight angle, be sure to check the oil regularly and keep the oil level full. Also, fuel capacity will be a little less at an angle.

**LIFTING**

The BULLDOG™ 5500 should be lifted by two people. (See Specification section for weight). The LowLift™ grab bars on both ends make lifting easier.

**PRE-OPERATION ENGINE SERVICE**

Read and understand the engine operating and maintenance instructions supplied with this machine before you operate the BULLDOG™ 5500.

**WARNING**

- Keep hands away from muffler or HOT engine parts.
- Stop the engine when fueling.
- Do not smoke when fueling.
- Remove fuel cap slowly to release pressure.
- Do not overfill tank.
- Wipe up spilled fuel and allow fumes to clear before starting engine.
- Keep sparks and flame away from tank.

**OIL** 

The BULLDOG™ 5500 is shipped with the engine filled with SAE 10W30 oil. **CHECK THE OIL LEVEL BEFORE YOU START THE ENGINE.** This is an added precaution. Do not screw in dipstick when checking oil level. **DO NOT OVERFILL.** Be sure the fill plug is tight after servicing.

**FUEL** 

Fill the fuel tank with clean, fresh, regular grade (minimum 87 octane lead free gasoline. **DO NOT MIX OIL WITH GAS.** The BULLDOG™ 5500 capacity is approximately 1.9 gallons (7.2 Liter). **DO NOT OVER-FILL,** allow room in the fuel tank for fuel expansion.

**SPARK ARRESTER**

Some federal, state or local laws may require gasoline engines to be equipped with exhaust spark arresters when they are operated in certain locations where unarrested sparks may present a fire hazard. The standard muffler included with this machine comes equipped with a spark arrester.

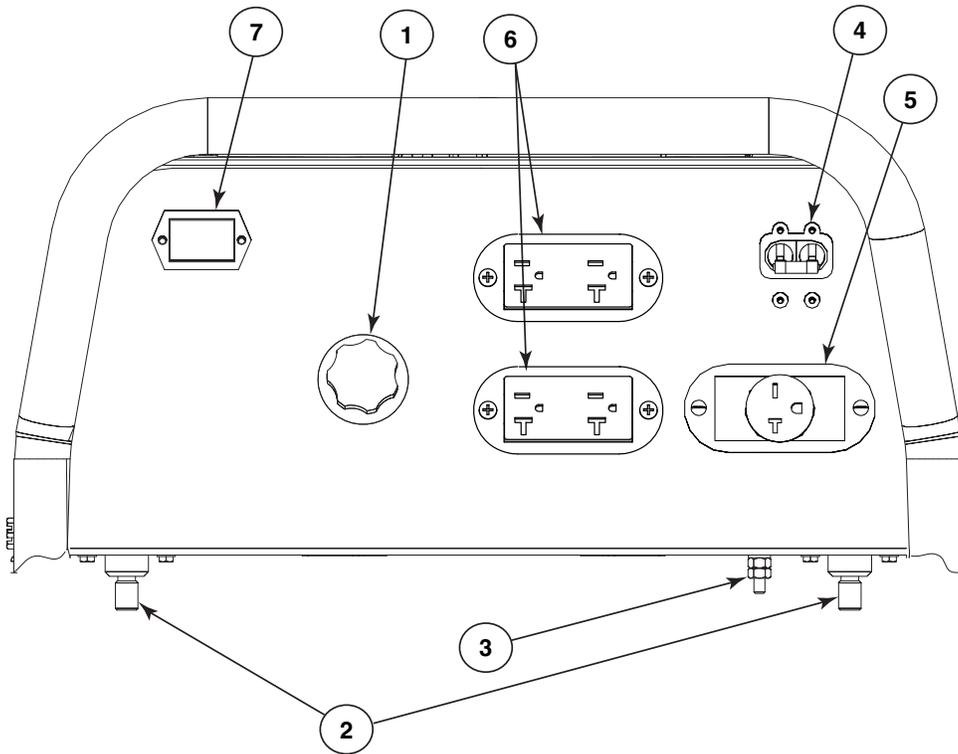
**BULLDOG™ 5500 Typical Fuel Consumption**

	Kohler CH395
No Load 3750 RPM ±100 R.P.M.	.31 Gallons/Hour 1.17 ( Liters/Hour)
AC CC Weld Output 80 Amps @ 25 Volts	.54 Gallons/Hour 2.04 ( Liters/Hour)
Auxiliary Power 4000 Watts (120/240 Volts)	.74 Gallons/Hour 2.80 ( Liters/Hour)

<b>WARNING</b>		<b>GASOLINE FUEL ONLY</b>	
	<ul style="list-style-type: none"> <li>• Stop engine when fueling.</li> <li>• Do not smoke when fueling.</li> <li>• Keep sparks and flame away from tank.</li> <li>• Do not leave unattended while fueling.</li> <li>• Wipe up spilled fuel and allow fumes to clear before starting engine.</li> <li>• Do not overfill tank, fuel expansion may cause overflow.</li> <li>• Close fuel shut off valve when transporting or not operating machine.</li> </ul>		<ul style="list-style-type: none"> <li>• Use in open, well ventilated area or vent exhaust outside.</li> </ul>
GASOLINE can cause fire or explosion		ENGINE EXHAUST can kill	MOVING PARTS can injure
			<ul style="list-style-type: none"> <li>• Keep away from moving parts.</li> <li>• Do not operate with panels open or guards off.</li> </ul>
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**BULLDOG™ 5500 OUTPUT CONNECTIONS**

FIGURE A.1



- 1. CURRENT CONTROL DIAL
- 2. WELD OUTPUT TERMINALS (2)
- 3. GROUND STUD
- 4. CIRCUIT BREAKER 20 Amp

- 5. RECEPTACLE - 240 VOLT, 20 AMP
- 6. DUPLEX RECEPTACLE (2)- 120 VOLT, 20 AMP
- 7. HOUR METER

**ELECTRICAL OUTPUT CONNECTIONS**

See Figure A.1 for the location of the current control dial, weld output terminals, ground stud, circuit breakers, 240 and 120 volt receptacles.

**WELDING CABLE CONNECTIONS**

**Cable Size and Length**

Be sure to use welding cables that are large enough. The correct size and length becomes especially important when you are welding at a distance from the welder.

Table A.1 lists recommended cable sizes and lengths for rated current and duty cycle. Length refers to the distance from the welder to the work and back to the welder. Cable diameters are increased for long cable lengths to reduce voltage drops.

**TABLE A.1  
RECOMMENDED WELDING CABLE  
SIZE AND LENGTH**

TOTAL COMBINED LENGTH OF ELECTRODE AND WORK CABLES	
Cable Length	125 Amps 30% Duty Cycle
0-50 ft (0-15m)	6 AWG
50-100 ft (15-30 m)	5 AWG
100-150 ft (30-46 m)	3 AWG
150-200 ft (46-61 m)	2 AWG
200-250 ft (61-76m)	1 AWG

### Cable Installation

Install the welding cables to your BULLDOG™ 5500 as follows. See Figure A.1 for the location of parts.

1. The gasoline engine must be OFF to install welding cables.
2. Remove the 1/2 - 13 flanged nuts from the output terminals.
3. Connect the electrode holder and work cables to the weld output terminals. You can connect either cable to either terminal, since the BULLDOG™ 5500 provides AC weld current.
4. Tighten the flanged nuts securely.
5. Be certain that the metal piece you are welding (the “work”) is securely connected to the work clamp and cable.
6. Check and tighten the connections periodically.



### CAUTION

- Loose connections will cause the output terminals to overheat. The terminals may eventually melt.
- Do not cross the welding cables at the output terminal connection. Keep the cables isolated and separate from one another.

Lincoln Electric offers a welding accessory kit with the properly specified welding cables. See the ACCESSORIES section of this manual for more information.

## ELECTRICAL CONNECTIONS

### MACHINE GROUNDING



Because this portable engine driven welder creates its own power, it is not necessary to connect its frame to an earth ground, unless the machine is connected to premises wiring (home, shop, etc.)

To prevent dangerous electric shock, other equipment to which this engine driven welder supplies power must:



### WARNING

1. **Be grounded to the frame of the welder using a grounded type plug.**
2. **Be double insulated.**

**Do not ground the machine to a pipe that carries explosive or combustible material.**

When the BULLDOG™ 5500 is mounted on a truck or a trailer, the machine generator ground stud **MUST** be securely connected to the metal frame of the vehicle. See Figure A.1. The ground stud is marked with the symbol .

### PLUGS AND HAND-HELD EQUIPMENT

For further protection against electric shock, any electrical equipment connected to the generator receptacles must use a three-blade, grounded type plug or an Underwriter's Laboratories (UL) approved double insulation system with a two-blade plug.

Ground fault protection is recommended for hand held equipment.



### WARNING

Never operate this machine with damaged or defective cords. All electrical equipment must be in safe condition.

### AUXILIARY POWER RECEPTACLES

The control panel of the BULLDOG™ 5500 features these three auxiliary power receptacles:

- (Two) 20 amp, 120 volt duplex (double outlet) receptacle.
- A 20 amp 240 volt simplex (single outlet) receptacle.

See Figure A.1.

Through these receptacles the machine can supply up to 4,000 rated continuous watts and 5,500 surge watts of single-phase AC power.

## PREMISES WIRING

The BULLDOG™ 5500 is not recommended for premises wiring.

The BULLDOG™ 5500 does not have a combined 120/240 volt receptacle and cannot be connected to a premises as described in other Lincoln literature.

Remember that the BULLDOG™ 5500 is intended only for backup, intermittent use power.

Certain electrical devices cannot be powered by the BULLDOG™ 5500. Refer to Table A.2 for these devices.

## CIRCUIT BREAKERS



Auxiliary power is protected by circuit breakers. When the machine is operated in high temperature environments, the breakers may tend to trip at lower loads than normally.



### CAUTION

Never bypass the circuit breakers. Without overload protection, the BULLDOG™ 5500 could overheat and/or cause damage to the equipment being used.

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 **CAUTION**

Certain Electrical devices cannot be powered to this Product. See Table A.2

**TABLE A.2**  
**ELECTRICAL DEVICE USE WITH THIS PRODUCT**

Type	Common Electrical Devices	Possible Concerns
Resistive	Heaters, toasters, incandescent light bulbs, electric range, hot pan, skillet, coffee maker.	NONE
Capacitive	TV sets, radios, microwaves, appliances with electrical control.	Voltage spikes or high voltage regulation can cause the capacitive elements to fail. Surge protection, transient protection, and additional loading is recommended for 100% fail-safe operation. <b>DO NOT RUN THESE DEVICES WITHOUT ADDITIONAL RESISTIVE TYPE LOADS.</b>
Inductive	Single-phase induction motors, drills, well pumps, grinders, small refrigerators, weed and hedge trimmers.	These devices require large current inrush for starting. (See Table B.3, GENERATOR POWER APPLICATIONS, in the OPERATION section of this manual for required starting wattages.) Some synchronous motors may be frequency sensitive to attain maximum output torque, but they <b>SHOULD BE SAFE</b> from any frequency induced failures.
Capacitive / Inductive	Computers, high resolution TV sets, complicated electrical equipment.	An inductive type line conditioner along with transient and surge protection is required, and liabilities still exist. <b>DO NOT USE THESE DEVICES WITH THIS PRODUCT.</b>

The Lincoln Electric Company is not responsible for any damage to electrical components improperly connected to this product.