

SAE-500[®] Severe Duty[™]

Processes

Stick, Gouging

Product Number

K1278-12 Kubota[®]

Output Range

80-575A DC Welding
3000 Watts AC Generator

Rated Output Current/Voltage/Duty Cycle

500A DC/40V/60%
400A DC/40V/100%

Number of Cylinders

4

HP @ Speed (RPM)

57.8 HP @ 1800 RPM

Weight/Dimensions (H x W x D)

2048 lbs. (928 kg)
45.8 x 28 x 83 in.
(1164 x 711 x 2109 mm)
To Top of Exhaust Tube
54.3 in. (1379 mm)

Great for the Off-Shore Salt Spray and Other Corrosive Environments.

For off-shore and other corrosive environments the SAE-500[®] Severe Duty[™] (The "Silver Bullet") is the preferred choice with its great arc performance, design simplicity, reliability and ruggedness! Utilizing customer experience and input from job-site use, it is an upgraded version of the workhorse SAE-500[®] that you can count on!

FEATURES

► Designed For The Off-Shore Salt Spray Environment

- Stainless steel and hot-dip galvanized case & internal sheet metal parts.
- Stainless steel brushholder assemblies.
- All copper coils.
- Coated radiator, laminations and wire connections.
- Sealed switches.

► Rugged Construction

- Heavy gauge steel case withstands rough field handling.

► Includes Features Per Mineral Management Services Code

- Spark arrestor and engine air intake shutdown device are standard.

► Arc Gouging

- Arc gouging with up to 3/8 in. (10 mm) carbons.

► Heavy-Duty Industrial Diesel Engine

- Kubota[®] 4-cylinder, water-cooled industrial turbo-charged diesel engine offers low maintenance and long life.

APPLICATIONS

- Pipelines
- Construction
- Maintenance



INPUT



OUTPUT



Two Year Extended Warranty Available in the U.S.A. and Canada



THE LINCOLN ELECTRIC COMPANY

PERFORMANCE

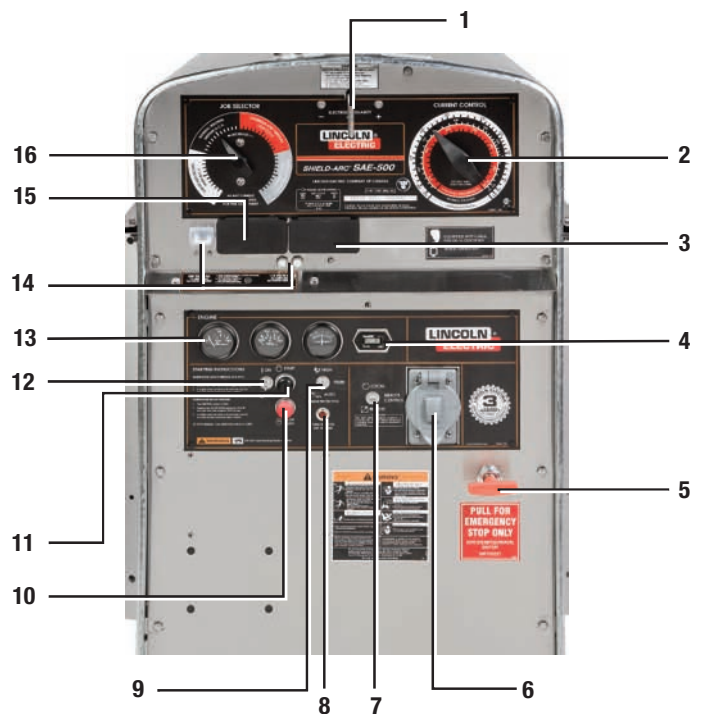
- 500 amp rated output DC arc welding power source with outstanding characteristics for pipe, construction and maintenance stick welding. 575 amp maximum output.
- Dual continuous output control. Continuous adjustment of voltage and current. Select either a soft “buttery” arc or a snappy “digging” arc for fast, high-quality welding.
- Polarity switch for selecting DC+, DC- welding output.
- Delivers 3,000 watts of 115V/230V AC power for a grinder, lights or other power tools.

FEATURES

- Pressure lubrication system with replaceable filter assures lubrication to all critical areas of the engine.
- Engine gauges indicate oil pressure, temperature and battery charging amps.
- All day welding with 29 gallon plastic fuel tank with combination fuel cap/fuel gauge. Pre-filter water separator and a filter in the fuel line help keep the fuel clean.
- Kubota® engine uses glow plugs for starting the engine at low ambient temperatures, down to -5° F (-21° C).
- Combination muffler/spark arrestor manufactured from stainless steel is standard on the machine. Spark arrestor included per MMS (Mineral Management Services) code.
- Air intake Emergency Shutdown Device on engine per MMS (Mineral Management Services) code.
- Single-side engine access for routine maintenance.
- Oil drain system includes ball valve, hose and clamp to direct oil beyond the base of the machine.
- Engine hour meter for scheduling maintenance.
- 100 ft. (30.5 m) remote control included – not a separate kit.

KEY CONTROLS

1. Polarity Switch
2. Current Control
3. 115V Receptacles with Covers
4. Engine Hour Meter
5. Air Intake Emergency Shutdown Handle
6. Remote Control Receptacle
7. Local/Remote Control Switch
8. Engine Protection Light
9. Engine Idler
10. Glow Plug Button
11. Pushbutton Start
12. On/Off Switch
13. Oil Pressure, Temperature, and Battery Charging Amps Gauges
14. Circuit Breakers
15. 230V Receptacles with Covers
16. Job Selector



QUALITY AND RELIABILITY

- Welding and AC generator outputs rated at 40°C (104°F).
- Most fasteners are stainless steel. Assembled with anti-seize compound.
- Automatic shutdown protection for low oil pressure or high coolant temperature.
- Printed circuit board for idler and engine protection is potted to provide a robust environmental shield.
- Manufactured under a quality system certified to ISO 9001 requirements and ISO 14001 environmental standards.
- Approved by the Canadian Standards Association (CSA).
- Three-year Lincoln Electric warranty (engine is warranted separately by the manufacturer).

Designed And Built For The Off-Shore Salt Spray And Other Corrosive Environments

Assembled on a heavy gauge galvanized steel frame. Designed for durability on the job site. Rugged construction withstands rough field handling, protecting internal parts.

Stainless steel roof, doors, control panel and remote control box.

Plastic fuel tank

Radiator - phenolic (plastic) dip-coated for corrosion protection.

Lexan™ nameplates - printing will not wash out from salt spray.

All copper coil windings. Improved coil insulation for increased durability.

Weather protective covers on all receptacles.

Generator, armature and exciter lamination stacks are dipped in E-Coat for a tough, completely bonded coating.

All toggle switches sealed to protect against moisture.

Brushholder assemblies are stainless steel and non-metallic materials to avoid corrosion.

All switch and wire connections are coated for corrosion protection and to prevent electrical "tracking" between contacts.

Hot-dip galvanized base, radiator shroud and internal steel components.



MACHINE SPECIFICATIONS

Product Name	Ordering Information	Description	CC Rated Output ⁽¹⁾ Current/Voltage/Duty Cycle	Generator AC Power ⁽²⁾	Dimensions HxWxL in (mm)	Weight lbs. (kg)
SAE-500® Severe Duty™	K1278-12 Kubota® EPA Tier 4i	500 Amp DC Arc Welder with 3,000 Watts of AC Power and 100 ft. (30.5 m) Includes Polarity Switch, Oil Drain System and Remote Control	Lincoln Rating 500A/40V/60% 400A/40V/100% 80-575 Amps Continuous Adjustment of Voltage and Current 97V Max. OCV @ 1800 RPM	3,000 Watts 60 Hz, AC 26 Amps @ 115V 13 Amps @ 230V	45.8 x 28 x 83 (1164 x 711 x 2109) To Top of Exhaust Tube: 54.3 (1379)	2048 (928)

⁽¹⁾ Based on 10 minute period. High Altitude: For maximum rating, derate the output 5% for every 1,640 ft. (500 m) above 1,312 ft. (400 m).

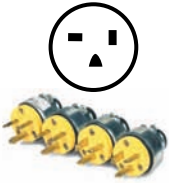
⁽²⁾ 115V will operate either 60 Hz or 50/60 Hz power tools, lights, etc.

ENGINE SPECIFICATIONS

Engine Model	Description	Horsepower & Displacement	Capacities	Operating Speeds	Fuel Consumption
Kubota® Diesel ⁽³⁾ V3600-T EPA Tier 4i	4 Cylinder, 4 Cycle Water-Cooled Turbo-Charged Diesel Engine with Dry Cartridge Air Filter and Water Separator	57.8 HP @ 1800 RPM 221 cu in (3.6 ltrs)	Fuel: 29.0 gals (109.8 ltrs) Oil: 14.0 qts (13.2 ltrs) Radiator Coolant: 3.4 gals (12.8 ltrs)	Full Load: 1,725 (500A) High Idle: 1,800 RPM Low Idle: 1,100 RPM	2.5 gals/hr - 9.3 ltrs/hr 0.7 gals/hr - 2.6 ltrs/hr 0.3 gals/hr - 1.2 ltrs/hr

⁽³⁾ Kubota® warranty is 2 years/2,000 hours for machines shipped within the U.S., Canada, Pacific Ocean region and Western Europe. Warranty is 1 year/1,000 hours for Central and South America, Asia, Africa and Middle East.

RECOMMENDED ACCESSORIES TO EXPAND MACHINE CAPABILITIES



GENERAL OPTIONS

Power Plug Kit

Provides two 115V plugs rated at 20 amps each, and two 230V plugs rated at 15 amps each. 120V plug may not be compatible with common household receptacles.
Order K802D



Large Welder Trailer

For heavy-duty road, off-road, plant and yard use. Includes pivoting jack stand, safety chains, and 14 in. (356 mm) wheels. Stiff .120 in. (3.0 mm) welded rectangular steel tube frame construction is phosphate etched and powder coat painted for superior rust and corrosion resistance. Low sway suspension gives outstanding stability with manageable tongue weight. Wheel bearings are packed with high viscosity, high pressure, low washout Lubriplate® grease. Includes a Duo-Hitch™ – a 2 in. (51 mm) Ball/Lunette Eye combination hitch. Overall width: 60 in. (1524 mm). Overall length 124 in. (3154 mm).

Order:
K2637-2 Trailer
K2639-1 Fender & Light Kit
K2640-1 Cable Rack



Four-Wheeled Steerable Yard Trailer

For off-road, plant and yard use. Includes an automatically engaging drawbar lock when the drawbar is raised to the verticle position. 13 in. (330 mm) wheels. Wheel bearings are packed with high viscosity, high pressure, low washout Lubriplate® grease. Also includes a Duo-Hitch™ – a 2 in. (51 mm) Ball/Lunette Eye combination hitch. Overall width 55 in. (1397 mm). Overall length 132 in. (3353 mm).

Order K2641-2



GFCI Receptacle Kit

Includes one UL approved 115V ground fault circuit interrupter duplex type receptacle and installation instructions. Replaces the factory installed 115V duplex receptacle. Each receptacle of the GFCI duplex is rated at 20 amps. Maximum total current from the GFCI duplex is limited to 20 amps.
Order K1690-1



STICK OPTIONS

Accessory Kit

For stick welding. Includes 35 ft. (10.7m) 2/0 electrode cable with lug, 30 ft. (9.1m) 2/0 work cable with lugs, headshield, filter plate, work clamp and electrode holder. 400 amp capacity.

Order K704

PRODUCT SPECIFICATIONS

Product Name	Product Number	Rated Output Current/Voltage/ Duty Cycle	Output Range	Type of Engine	No. of Cylinders	HP & Speed (rpm)	H x W x D inches (mm)	Net Weight lbs. (kg)
SAE-500® Severe Duty™	K1278-12	500A DC/40V/60% 400A DC/40V/100%	80-575A DC 3000 watts	Kubota® V3600-T Turbo Diesel EPA Tier 4i	4	57.8 @ 1800	45.8 x 28 x 83 (1164 x 711 x 2109) To Top of Exhaust Tube: 54.3 (1379)	2048 (928)

For best welding results with Lincoln Electric equipment, always use Lincoln Electric consumables. Visit www.lincolnelectric.com for more details.

CUSTOMER ASSISTANCE POLICY

The business of The Lincoln Electric Company is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or advice about their use of our products. Our employees respond to inquiries to the best of their ability based on information provided to them by the customers and the knowledge they may have concerning the application. Our employees, however, are not in a position to verify the information provided or to evaluate the engineering requirements for the particular weldment. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or advice. Moreover, the provision of such information or advice does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or advice, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose is specifically disclaimed.

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LINCOLN®
ELECTRIC
 THE WELDING EXPERTS®