

# SAE-400 Severe Duty™

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

For off-shore and other corrosive environments the SAE-400 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-400 that you can count on!

### Processes

Stick, Gouging



 Perkins



### Output



### Input



## Advantage Lincoln

- 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, fuel tank, laminations and wire connections.
  - Sealed switches.
- Rugged Construction**
  - Built in a heavy gauge steel case designed for durability on the job site.
  - Withstands rough field handling.
- Includes Features Per Mineral Management Services Code**
  - Spark arrestor and engine air intake shutdown device are standard.
- Dual Continuous Control**
  - Dual continuous control of both current and open circuit voltage lets operator select the precise arc characteristics needed for each job.
- High Duty Cycle Welding Output**
  - 100% duty cycle at 400amps for demanding applications. Also rated at 500 amps.
- Arc Gouging**
  - Arc gouging with up to 3/8" (10 mm) carbons.
- Heavy-Duty Industrial Diesel Engine**
  - Perkins 4-cylinder, water-cooled industrial diesel engine offers low maintenance and long life.
- Three-Year Warranty**
  - Three-year Lincoln warranty on welder (engine is warranted separately by the engine manufacturer).

## TECHNICAL SPECIFICATIONS

Product Name	Rated Output Current/Voltage/Duty Cycle	Output Range	Type of Engine	No. of Cyl.	HP & Speed (rpm)	Dimensions H x W x D in. (mm)	Net Weight lbs (kg)
SAE-400 Severe Duty	400A DC/40V/100% 500A DC/40V/35%	80-575A DC 3000 watts	Perkins 1104C-44 Diesel	4	68.4 @ 1725	50 x 28 x 83 (1270 x 711 x 2109)	2,210 (1,002)

## A CLOSER LOOK

### PERFORMANCE

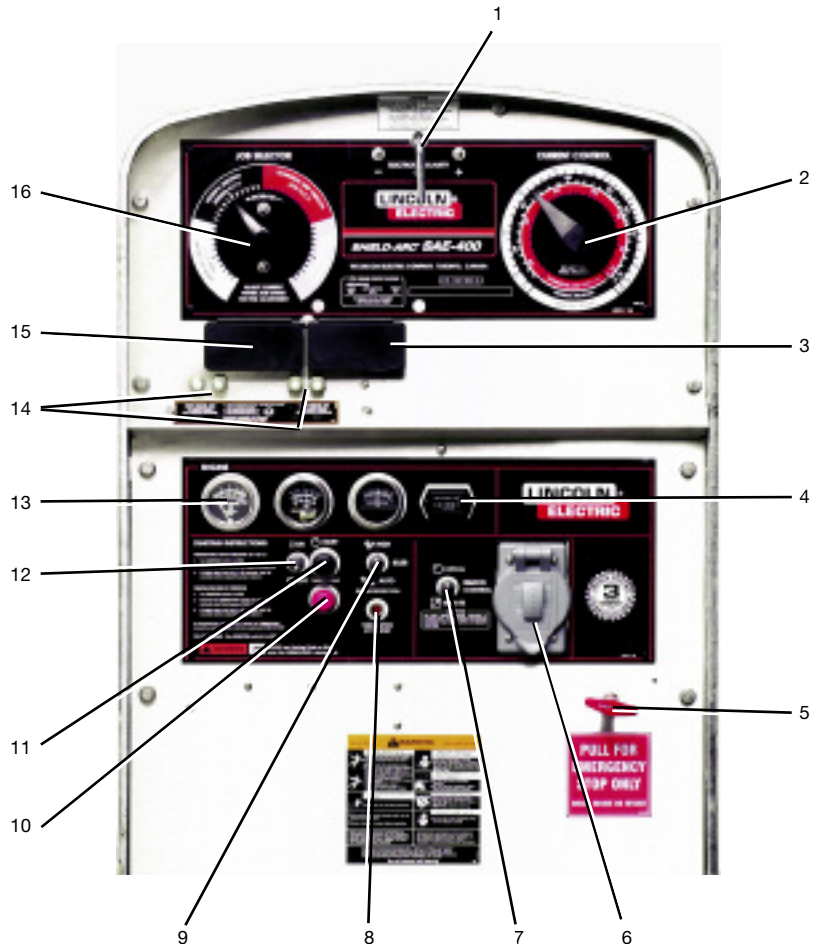
- 400 amp rated output DC arc welding power source with outstanding characteristics for pipe, construction and maintenance stick welding. 575 amp maximum output.
- Dual continuous output control. Select either a soft “buttery” arc or a snappy “digging” arc for fast, high-quality welding.
- Arc gouging with up to a 3/8" carbon.
- Delivers 3,000 watts of 115V/230V AC power for a grinder, lights or other power tools.

### FEATURES

- Polarity switch for selecting DC+, DC- welding output.
- 100 ft. (30.5m) remote control included – not a separate kit.
- Powered by a heavy duty, industrial Perkins diesel engine.
- 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 22.5 gallon fuel capacity. Sediment bowl and a filter in the fuel line help keep the fuel clean.
- Pushbutton starting is powered by two 12V batteries.
- Glow plugs for starting the engine at low ambient temperatures, 32° F (0° C) 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.

### Key Controls

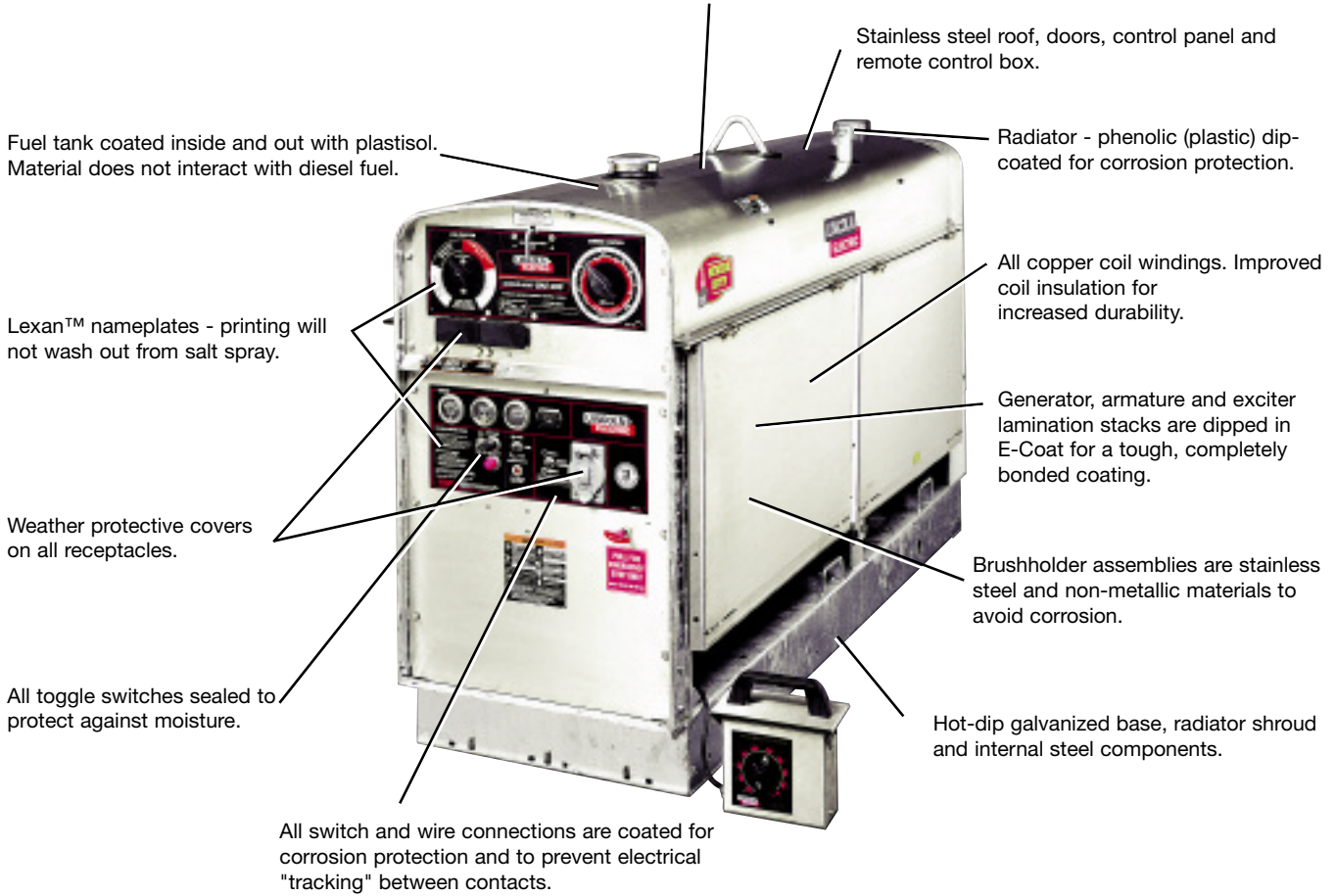
1. Polarity Switch
2. Current Control
3. 115V Receptacles with Covers
4. Engine Hour Meter
5. Air Intake Emergency Shutdown Handle
6. Remote Control Receptacle
7. Local/Remote Control
8. Engine Protection Light
9. Engine Idler
10. Glow Plug Button
11. Pushbutton Start
12. On/Off Switch
13. Oil Pressure,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



**QUALITY AND RELIABILITY**

**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.



- Most fasteners are stainless steel. Assembled with anti-seize compound.
- Perkins 4-cylinder, water-cooled industrial diesel engine offers low maintenance and long life. Water separator on engine to filter water from diesel fuel.
- Automatic shutdown protection for low oil pressure or high coolant temperature.
- Two 12 volt batteries paralleled for 1130 cold cranking amps of engine starting.
- 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 warranty. (Engine is warranted separately by the manufacturer.)



**MACHINE SPECIFICATIONS**

Product Name	Ordering Information	Description	CC Rated Output (1) Current/Voltage/Duty Cycle	Generator AC Power (2)	Dimensions HxWxL (3) in (mm)	Weight lbs (kg)
SAE-400 Severe Duty	K1278-8	400 Amp DC Arc Welder with 3,000 Watts of AC Power and 100 ft. (30.5m) Remote Control	<b>Lincoln Rating</b> 400A/40V/100% 500A/40V/35%  80-575 Amps  Continuous Adjustment of Voltage and Current	3,000 Watts 60 Hz, AC (2)  26 Amps @ 115V  13 Amps @ 230V	50 x 28 x 83 (1270 x 711 x 2109)	2,210 (1,002)

(1) Based on 10 minute period. High Altitude: For maximum rating, derate the output 5% for every 1,650 ft (500 m) above 3,300 ft. (1,000 m).

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

(3) Height is to top of lift bale; 46 in. (1168mm) case height.

**ENGINE SPECIFICATIONS**

Engine Model	Description	Horsepower & Displacement	Capacities	Operating Speeds	Fuel Consumption
Perkins Diesel (4) 1104C-44	4 Cylinder, 4 Cycle Water-cooled Diesel Engine with Dry Cartridge Air Filter and Water Separator EPA Tier 2	68.4 HP @ 1,725 RPM  269 cu in (4.4 ltrs)	<b>Fuel:</b> 22.5 gals (85.1 ltrs)  <b>Oil:</b> 10.1 qts (9.6 ltrs)  <b>Radiator Coolant:</b> 3.4 gals (12.8 ltrs)	<b>Full Load: 1,725 RPM</b> (400A)  <b>High Idle: 1,800 RPM</b>  <b>Low Idle: 1,100 RPM</b>	1.8 gals/hr (6.8 ltrs/hr)  0.7 gals/hr (2.6 ltrs/hr)  0.3 gals/hr (1.1 ltrs/hr)

(4) Engine warranty is 2 years/3,000 hours.





**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**

**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**



**Large Welder Trailer**

For heavy-duty road, off-road, plant and yard use. Includes pivoting jack stand, safety chains, and 14" wheels. Stiff .120" 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" Ball/Lunette Eye combination hitch. Overall width: 60".

Order:

K2637-1 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" wheels. Wheel bearings are packed with high viscosity, high pressure, low washout Lubriplate® grease. Assembles directly to the base of the SAE-400 or SAE-400 Severe Duty welder. Also includes a Duo-Hitch™ – a 2" Ball/Lunette Eye combination hitch. Overall width: 55".

**Order K2641-1**



**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**



**SAE-400 SEVERE DUTY ORDER FORM**

PRODUCT DESCRIPTION	ORDER NUMBER	QUANTITY	PRICE
<b>SAE-400 SEVERE DUTY</b>	<b>K1278-8</b>		
<b>RECOMMENDED GENERAL OPTIONS</b>			
Power Plug Kit	K802D		
GFCI Receptacle Kit	K1690-1		
<b>NEW!</b> Large Welder Trailer with Duo-Hitch™; 2" Ball/Lunette Eye Hitch	K2637-1		
<b>NEW!</b> - Fender and Light Kit	K2639-1		
<b>NEW!</b> - Cable Rack	K2640-1		
Four-Wheeled Yard Trailer with Duo-Hitch™; 2" Ball/Lunette Eye Hitch	K2641-1		
Accessory Kit	K704		
<b>TOTAL:</b>			

**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 advice or information about their use of our products. We respond to our customers based on the best information in our possession at that time. Lincoln Electric is not in a position to warrant or guarantee such advice, and assumes no liability, with respect to such information or advice. We expressly disclaim any warranty of any kind, including any warranty of fitness for any customer's particular purpose, with respect to such information or advice. As a matter of practical consideration, we also cannot assume any responsibility for updating or correcting any such information or advice once it has been given, nor does the provision of information or advice create, expand or alter any warranty with respect to the sale of our products.

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