



MODEL  
All

DATE  
07 AUG 2009


NUMBER  
1-224NAS

Service

ADMINISTRATION BULLETIN

*Subject:* Mandatory Tool - Midtronics PSC-550 Vehicle Power Supply

Jaguar Land Rover North America would like to reinforce that it is a **mandatory requirement** for each dealer to have one (1) Midtronics PSC-550 / PSC-550S Vehicle Power Supply for **each** Integrated Diagnostic System (IDS) in use.

Essential Tool	Description and Use
	<p><b>Description:</b> Midtronics PSC-550S Vehicle Power Supply</p> <p><b>Applicability:</b> Any time IDS is connected to a vehicle, especially when performing software downloads.</p>
Feature	Specifications
Input volts (VAC)	<b>108-132V</b>
Frequency (Hz)	<b>40-70Hz</b>
Max amp draw (AC)	<b>15A</b>
Max watt draw (VA)	<b>1053w (1620)</b>
Output amps (A)	<b>55A(max)</b>
Output volts (DC)	<b>13.4V@ full load</b>
Cable Length	<b>6' (12' optional)</b>
Output Voltage Tolerance (no load)	<b>+/- 0.7%</b>
Ripple and noise	<b>&lt;50mV rms</b>
Typical Efficiency	<b>80%</b>
Line Regulation	<b>100mV rms</b>
Load regulation	<b>&lt;1%</b>
Fan control	
Thermal protection	
Working temperature range	<b>0 - 40°C</b>
Storage temperature	<b>20 - 80°C</b>

CIRCULATE TO:	Dealer Principal	General Manager	Sales Manager	Service Manager	Parts Manager	Technician	Warranty Administrator	Parts Professional
		<b>X</b>		<b>X</b>		<b>X</b>		

Jaguar requires the use of the **Midtronics PSC-550 / PSC-550S Vehicle Power Supply** as an external power source anytime IDS is connected to a vehicle, especially when conducting module programming.

The Midtronics PSC550 power supply unit is not designed to recharge low batteries. If the vehicle battery is low, the battery must be recharged to the approved level as specified in the Jaguar Battery Care Manual. It is also not advisable to connect or leave connected a battery charger of any brand / model to the vehicle during module programming. Under these circumstances, the output of the battery charger may be too high and create electrical noise on the vehicle electrical system which is known to create communications issues between IDS and the vehicle in some cases.

'Smart' battery chargers, including the Midtronics GR1 unit, may switch / modulate charging rates to re-condition a partially sulfated battery or to protect internal circuitry. Electrical surges created by many 'smart battery chargers or poorly regulated transformers on inexpensive battery chargers can create voltage spikes and electrical noise of sufficient volume to interrupt module programming.

**Listed below are the 'Best Practices' that should be followed:**

- Start with a known good battery (open circuit voltage minimum of 12.5 volts)
- Before connecting the PSC-550 ensure the following guidelines are followed.
  - Ensure the AC outlet that the PSC-550 is to be plugged into is wired correctly and has a good ground
  - Avoid using long extension cords as a voltage drop may occur, affecting the maximum output of the PSC-550
  - Ensure the cable lug set screws are properly tightened; failure to secure the cables to the PSC-550 will cause a lower maximum output
- The voltage target with the PSC-550 connected and the 'Key On / Engine Off' should be 13.0 - 13.5 volts, even though IDS only inhibits module programming when voltage falls below 12.5 volts. The PSC-550 is designed to supply a constant 13.4 Volts at a *maximum* rate of 55 Amps. For this reason it is important to switch off all electrical consumers on the vehicle during module programming including headlamps, sidelights, fog lamps, radio, HVAC blower fans, wipers, and defrosters. These additional electrical loads may draw a higher amperage rate than the PSC-550 is designed to deliver, which will cause the voltage to DROP during IDS use.
- Also, because the vehicle alternator charging rates / amperages are variable and would be subject to issues similar to using a 'smart' battery charger outlined above, flash programming modules with the vehicle running is NOT an approved alternative to using the PSC-550.

**IMPORTANT NOTE: PSC-550 CONNECTION PROCEDURE**

Connect the cable clamps to the battery BEFORE connecting the Power Supply unit to a 120-volt, 3-wire, grounded AC power source.

The PSC-550 Power Supply is designed with high quality components to help ensure years of continuous use. Multiple electronic features protect the unit for a long, trouble-free life:

- Fully automatic, regulated DC output: prevents overcharging of battery while maintaining optimum battery voltage downloads and fault tracing
- Reverse Battery Polarity Protection for added safety
- Brownout Input Protection
- Over-Current Protection: cycle-peak limiting and rated-current limiting to maximize the life of the converter
- Over-Temperature Protection
- Proportional fan control circuit: enables the fan to turn on and off very slowly, minimizing electrical noise and voltage surges
- Specially designed storage / carrying case: protects the unit during storage, protects the vehicle during charging.
- Standard 6' leads; optional 12' leads (part number: 165-A114) available from one of the following sources:
  - Jaguar Land Rover Technician Tool Program: 800-327-1803
  - Rotunda: 800-ROTUNDA (800-768-8632)
  - SPX: 800-345-3399

In addition to the above, the PSC-550S Power Supply has the following features:

- Circuit breaker protection vs. fuse protection
- Advanced switch mode design

## **WARRANTY INFORMATION:**

**NOTE: Warranty is administered by Midtronics, Inc.; Warranty coverage is not handled by SPX Corporation or by Jaguar Land Rover North America LLC.**

### *Warranty Period:*

Two (2) years from date of purchase. The Warranty is full replacement except for physical damage or opening of / tampering with the unit.

If Part Number PSC-550-KIT Power Supply is replaced under warranty, the effective warranty period of the replacement unit is the balance of the original 24 months.

### *Warranty Procedure:*

Call Midtronics Service: 800-776-1995. Follow instructions provided by Midtronics, Inc. They will issue a Return Authorization (RA) number that is required for unit return.

- **U.S. DEALERS: Ship the PSC-550 KIT Power Supply prepaid to:**

- MIDTRONICS, INC.  
7000 Monroe Street  
Willowbrook, IL 60521

- **CANADIAN DEALERS:**

Follow instructions provided by Midtronics at time of your call.

### *Return Shipment:*

For U.S. Dealers, Midtronics, Inc. will service and ship the PSC-550-KIT Power Supply within one (1) business day of receipt. Canadian Dealers will be shipped a PSC-550-KIT Power Supply within three (3) business days of receipt.

Midtronics will return the replacement unit, prepaid, the same way the dealer shipped it to them.

If you have questions about the status of the return shipment, contact Midtronics directly: 800-776-1995.

### *Repairs:*

Contact Midtronics for more information: 800 776-1995.

## **OUT OF WARRANTY REPAIRS:**

For out of warranty repairs please refer to Service Bulletin 1-218NAS.