Engine Controls - Software Download Fault Prevention

NO: 30-04
DATE: 10-13-2005
MODEL: All Vehicles
M. YEAR: All
SUBJECT:

Midtronics PSC-550 Vehicle Power Supply use required during Software Download. Includes Mobile Technician Program

REFERENCE:
Special tool bulletin no. 111-A // VADIS/VIDA repair instruction
This Tech Note supercedes the previous TNN 30-04 dated 10-11-05. Please update your files.

DESCRIPTION:
Software Download failure due to too high or too low voltage
When performing a software download as well as electronic diagnostics, activations and quick tests within VIDA, it is imperative that the vehicle's system voltage is maintained between apx. 13.0V and 14.0V.
We have found that certain SWDL (Software Download) faults may occur due to too high or too low a voltage. Among them are; Half loaded nodes and check sum errors.


MIDTRONICS
PSC-550
POWER CHARGE
LISTED
50 DL
Power Converter
E188141
Input Volts : 108–132 Vac
Input Watts : 1050 Watts
Input Frequency : 50–60 Hz
Output Volts @ Max Load : 13.4 Vdc
Output Amps : 55 Amps
WARNING: TO PREVENT FIRE, DO NOT COVER OR OBSTRUCT VENTILATION OPENINGS. DO NOT MOUNT IN ZERO CLEARANCE COMPARTMENT; OVERHEATING MAY RESULT. DO NOT INSTALL IN COMPARTMENTS CONTAINING BATTERIES OR FLAMMABLE MATERIALS.
REPLACE WITH 30A MAX. RATED FUSE
CAUTION:

Too high a voltage can be caused by using commonly available Constant current type chargers. These are the type used in most automotive shops. This type of charger will increase the charging voltage to maintain a constant current setting. Therefore, the Voltage may increase up to 17 Volts or higher depending on the condition (internal resistance) of the battery to maintain the current setting. While the higher voltages can be advantageous for charging batteries, it can also be the reason for failed Software Downloads, one or more nodes stuck in Program mode and misleading results while fault tracing certain circuits.

Too low a voltage can also cause nodes to become stuck in programming mode. Therefore, Battery Booster Packs are not acceptable for use during Software Downloads. Fast chargers, Boost chargers, standard battery chargers, especially when set to "boost" should never be used during software downloads due to the excessive voltage and current they can supply under certain conditions.

Volvo now requires the use of the Midtronics PSC 550 when performing SWDLs and during fault tracing. This includes downloads performed by your Mobile technician if your retailer is using one. The Midtronics PSC 550 is a constant voltage power supply capable of 55 Amperes max while regulating the voltage to 13.6. The use of this power supply will prevent over voltages during SWDLs and fault tracing.

The Midtronics PSC-550 is classified as a mandatory tool and will be allocated to all US and Canadian retailers by SPX/Kent-Moore during October 2005. Please refer to Special Tool Bulletin 111-A for more information.

FOR MOBILE TECHNICIAN RETAILERS:

The Midtronics PSC-550 power supply unit is also required for all SWDLs in the field. As a Mobile Technician retailer you are required to add this mandatory tool to your inventory. This power supply supersedes the previous 20 AMP battery charger previously required.

Note: The unit purchased for Mobile Technician use will be in addition to your allocated requirement.

Important Note: Connection procedure:

Install the clamps at the battery before connecting the unit to the 115VAC outlet.