



Get The PennTex Advantage!
PERFORMANCE, ENDURANCE AND SATISFACTION

HOW TO DETERMINE TOTAL VEHICLE AMPERAGE DEMAND Can Your Alternator Handle the Load?

With all of the modern accessories on vehicles today you have to know that your charging system will handle the load. If it's working too hard to keep the batteries charged you're asking for trouble. Find out the actual amperage demand of your electrical system by performing the attached amperage demand test. Compare your results to the amperage output of your alternator at idle.

The ideal charge rate for an alternator would be 50% to 75% of rated alternator amperage output. That would mean that the charging system is not having to overwork to keep the batteries charged. In most OEM systems that are called on to do Heavy-Duty service, this charge rate is more like 85% to 100% of rated amperage output all day long. Even 75% is high for a OEM alternator. It's just a matter of time before there are heat failures in bearings, rotors, stators, and diodes. These components don't last long when subjected to heat that's beyond what they were designed for.

If your mass-produced OEM alternator is replaced once it will probably go out again. Saving a little money at initial vehicle purchase is not worth the lost time you'll spend replacing an OEM alternator that can't handle the heat and long hours of operation. You can save this aggravation by specifying a PennTex Charging System when your vehicle is built. PennTex Charging Systems were designed for heavy-duty service. We have more than 15 years of experience building alternators that live under extreme conditions. Our systems are proven.

If you have any questions please contact us at 877-590-7366.

PERFORMANCE, ENDURANCE AND SATISFACTION

PennTex
INDUSTRIES, INC.

Manufacturers of
High Efficiency Alternators and
Mobile Electronic Devices.

Corporate:
202 Plaza Drive
Manchester, PA 17345
Ph: 717/266-8762
Fax: 717/266-7803

www.penntexusa.com
Email: sales@penntexusa.com or
tech@penntexusa.com

Manufacturing:
7620 Flagstone Drive
Fort Worth, TX 76118
Ph: 817/590-2818
Toll Free: 877/590-7366
Fax: 817/590-0505





HOW TO DETERMINE TOTAL VEHICLE AMPERAGE DEMAND

There are draws on the charging system that are constant, some that are switch-controlled, and some that are momentary. An example of a constant draw would be the ignition system or injectors. An example of a switch-controlled draw would be the air conditioning or headlights. An example of a momentary draw would be a wheelchair lift. The following is a test to determine total charging system requirements (draw) on a vehicle.

- 1) Determine how many batteries you have. Most vehicles will have at least two batteries.
- 2) Be sure that the batteries are fully charged.
- 3) With the engine running and all the accessories off, clamp an amp probe on the Positive battery cable at each individual battery. Note the amperage reading at each battery and record it here: Battery One: _____ Battery Two: _____ Battery Three: _____.
- 4) Turn the engine off.
- 5) Turn the ignition switch on with the engine and accessories off. Check the amperage draw with only the key on and no accessories on. Clamp the amp probe on positive battery cable at each battery, same as before. Determine what amount of amperage draw each battery has and record it here.
 Battery One Draw: _____ Battery Two Draw: _____ Battery Three Draw: _____.
- 6) Subtract the amount listed for each battery in Step 5 from the amount listed in Step 3 and put that in the appropriate battery row marked "Engine."
- 7) With the engine off, turn each listed accessory load on one at a time and measure the draw at each battery. Record it on the sheet. **VERY IMPORTANT:** The "Engine" amperage amount must be subtracted from each individual accessory load to determine the actual amperage draw.



In this photo the meter is turned off. Rotate the dial to the "DC Amps" scale and clamp the meter around the positive battery cable of the battery being tested.

PERFORMANCE, ENDURANCE AND SATISFACTION

PennTex
INDUSTRIES, INC.

Manufacturers of
High Efficiency Alternators and
Mobile Electronic Devices.

Corporate:
 202 Plaza Drive
 Manchester, PA 17345
 Ph: 717/266-8762
 Fax: 717/266-7803

Manufacturing:
 7620 Flagstone Drive
 Fort Worth, TX 76118
 Ph: 817/590-2818
 Toll Free: 877/590-7366
 Fax: 817/590-0505

www.penntexusa.com
Email: sales@penntexusa.com or
tech@penntexusa.com





Get The PennTex Advantage!
PERFORMANCE, ENDURANCE AND SATISFACTION

Total Vehicle Amperage Demand Test Sheet			
	BATTERY #1	BATTERY #2	BATTERY #3
LOAD:	DRAW:	DRAW:	DRAW:
Engine:			
Lights on High Beam:			
Wipers on High Speed:			
Radio/Stereo:			
Interior Lights:			
Entry Lights:			
Destination Sign:			
2-way Radio Equipment:			
Brake Retarder:			
Electric Doors:			
Power Windows:			
Power Door Locks:			
Lift # One:			
Lift # Two:			
Front A/C on High Speed:			
Front A/C on High Speed:			
<i>Other Vehicle Accessories:</i>			
#1:			
#2:			
#3:			
#4:			
TOTAL AMPERAGE DRAW:			

PERFORMANCE, ENDURANCE AND SATISFACTION

PennTex
INDUSTRIES, INC.

**Manufacturers of
 High Efficiency Alternators and
 Mobile Electronic Devices.**

Corporate:
 202 Plaza Drive
 Manchester, PA 17345
 Ph: 717/266-8762
 Fax: 717/266-7803

Manufacturing:
 7620 Flagstone Drive
 Fort Worth, TX 76118
 Ph: 817/590-2818
 Toll Free: 877/590-7366
 Fax: 817/590-0505

www.penntexusa.com
Email: sales@penntexusa.com or
tech@penntexusa.com

