

Precision Parts

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LIVE WIRE

Welcome

*Greg Stuart
Engineering Manager*

Welcome to the February 2002 issue of our "Live Wire" newsletter. PPR has been blessed with a good start to the calendar year with strong sales for the month of January.

On page 2 Mike Sloan (National Sales Manager) presents in detail PPR's in house zinc plating line. We are already seeing the benefits of committing to doing our own plating.

Page 3 is Greg Stuart's 'Unit of the Month, DAA551.

On Page 4, **Hot Stuff** discusses starter ignition terminal harness plugs for late model Chrysler/Jeep applications.

For more information on these articles or other information, I can be E-mailed directly at:

gstuart@pprok.com

I look forward to hearing from you.

THANKS.

Contact Us



By Phone: 1-800-654-3846 ext. 243
Mon - Fri 7:00-4:30 Central Time
Precision Parts Technical Support can answer your questions on cataloging and technical issues.



By Fax: **1-405-685-7215**
Mon - Fri 7:00-4:30 Central Time

Precision Parts Technical Support can provide you with technical information via fax line. Call or fax in your request and we can respond by fax. We can supply catalog information, copies of technical articles and service bulletins.



By Email: techsupport@pprok.com

Combined, our technical staff has hundreds of years of experience diagnosing and correcting electrical system problems. We also have numerous resources available to help research and solve your toughest problems.



Marketing

Mike Sloan
National Sales Manager

In the October issue of the Live Wire, I mentioned a few of the changes and improvements that we were undertaking. The primary addition we have made in the last 90 days is the addition of a Zinc-Chromate Plating facility.

My first thoughts of plating were of concern..... concern about environmental issues. My concerns have been put to bed. We hired a consulting Engineer to help us in the design and construction of the facility. Jim Archer made numerous suggestions that we followed closely.

First was the selection of the process of stripping any old plating from the parts. Most platers use a strong acid solution to strip. We use a much less hazardous caustic solution that eliminates the concern regarding the environment and the E.P.A. The caustic solution leaves a lot less waste product requiring disposal.

Next, we actually built a building adjacent to our existing plant that houses the plating line. After the building was constructed, the next step was to build a stainless steel containment liner that the plating equipment sits in. If there were ever a leak, the liner would keep it totally contained.

The primary benefit we have realized in this addition is a reduction in "through put time". In the past, we sent parts to a local plater. There was a 4-5 day turn-around time in receiving the parts back. Then the parts had to be sorted out before they could go into production. We have reduced the plating process to 4-5 hours! In addition to this production time savings, we batch the parts to our own specifications, so there is virtually no follow-up sorting to do.

We have the ability to rack plate parts that need to be positioned a certain way (pulleys and fans) and barrel plate small hardware.

Zinc-Chromate Plating



As you can see from the picture above, there is a motorized lift and transport system that moves the racks and barrels of parts from one tank to another. We have a long-time employee Roy Pigg running this department for us. Roy has had quite a bit of experience running plating equipment over the years. He has 2 employees that load and unload the racks and keep him ahead of the work load.



We have started some changes in the way we prepare the parts for plating. We used to bead blast all of the parts prior to delivering them to the plater. Now we are simply washing them prior to stripping and re-plating. This maintains a smoother surface finish that makes the plated parts brighter. Plating is actually simply a way to prevent corrosion, but the side benefit is a better looking unit to sell.



We will see a marked improvement in the quality of our finished product as we fine tune our processes and procedures.



Unit of the Month

Typical Wiring Diagram

1994 Nissan Sentra

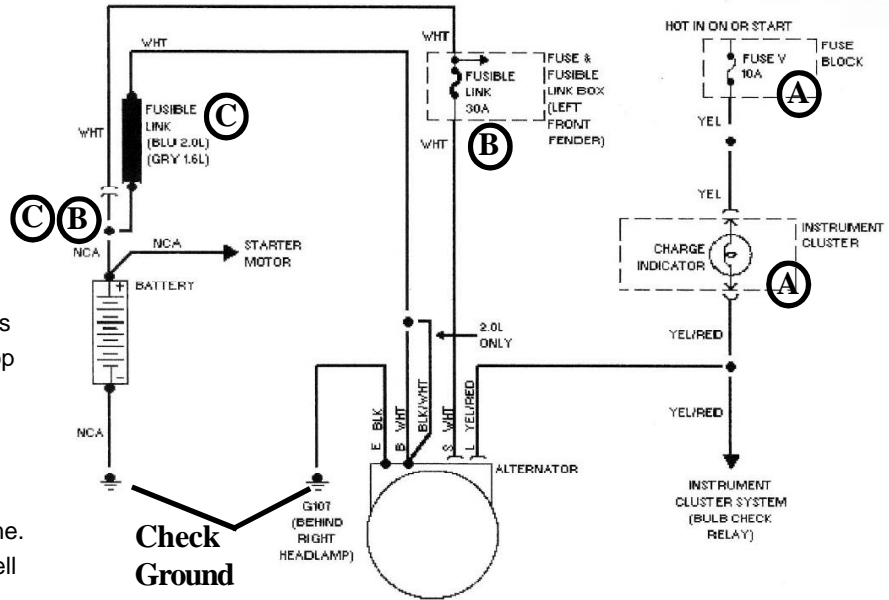
Greg Stuart
Engineering Manager

DAA551

This month we need to investigate voltage drops on the:

- 1994--1996 Nissan Sentra
- 1995 - 1996 Nissan 200SX

Voltage drops are very important to this vehicle charging system. A voltage drop represents lost amperage that can be used to charge the battery or run the vehicle's electrical systems. The alternators on these vehicles run at maximum output the majority of the time. This results in premature failure as well as extensive damage to the alternator rectifier and stator assemblies.



Check Ground

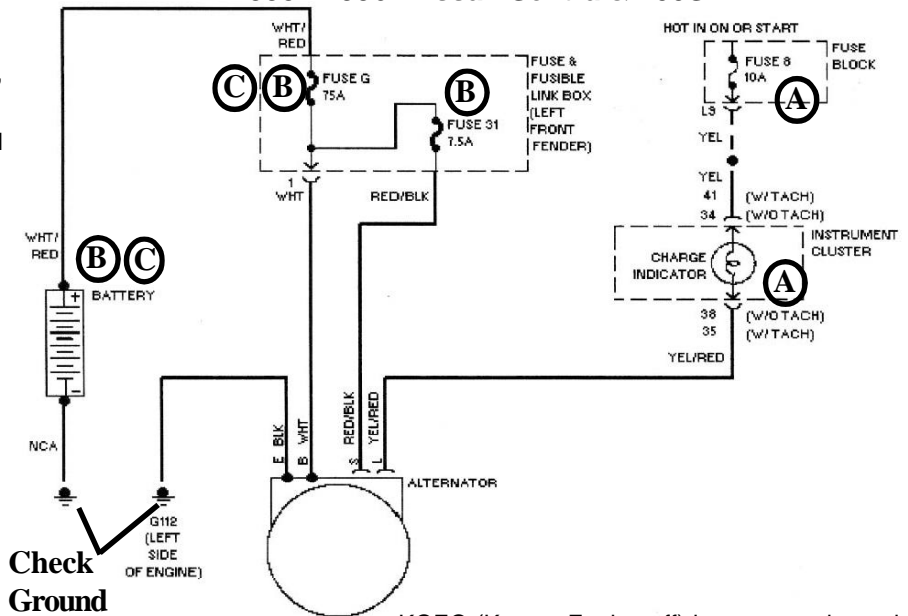
1995 - 1996 Nissan Sentra & 200SX

System Overview

When the ignition switch is in on or start, battery current flows from the "L" terminal through the alternator to ground (E), causing the **charge lamp** to light up. Then when the engine is started and charge voltage increases, the increased voltage potential from the "L" terminal causes the **charge lamp** to go out. Note: If your alternator will not start to charge until you reach high rpm, but remains charging until you turn the car off, there is a voltage drop in the "L" charge lamp circuit.

Checking Terminal Voltage.

Visually check for wires and components that are loose or corroded. These can all lead to voltage drops in the system. The following table should be used when testing for voltage drops:



Check Ground

KOEO (Key on Engine off) harness unplugged from alternator. Voltage must be present on **"L"** & **"B"**. Alternator indicator light on dash must be off.

Terminals	Volts	Condition (s)
"B" terminal of alternator (+) positive terminal of battery (-)	0.2	charging 10 amps flowing in circuit
negative terminal of battery (+) alternator frame (-)	0.2	charging
positive terminal of battery (+) "L" terminal of alternator (-)	0.2	engine off and key on
(+), (-) = Tester probes on voltmeter		
Note: Charging voltage is 14.7 volts System voltage is 12.1 volts		

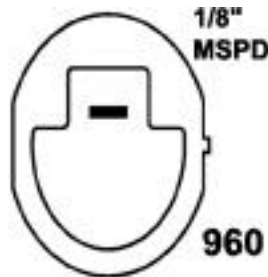
- A.** No voltage at "L". 1994 Check fuse "V" and indicator bulb. 1995/96 Check fuse 8 and Indicator bulb.
 - B.** No Voltage at "S". 1994 Check 30A fusible link on white wire and connection near battery. 1995/96 Check fuse "G", fuse 31 and battery connection.
 - C.** No voltage at "B". 1994 Check fusible link (Blu or Gry) and connection at the battery. 1995/96 Check fuse "G" and connection at the battery!
- ! Check the ground connections!**

HOT STUFF

Late model Chrysler solenoid ignition terminals

On some 1998 and newer Chrysler/Jeep starter applications, we have seen a high loss rate on solenoid caps and terminals on some of the part numbers. The solenoid ignition wire terminals are vulnerable to damage during handling. We have assigned a plug number of 960. The starter numbers we currently have identified with the 960 plug style are:

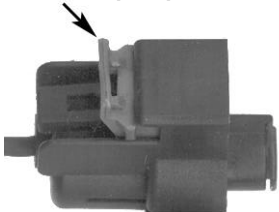
DOS503 DOS527 DOS535 DOS758



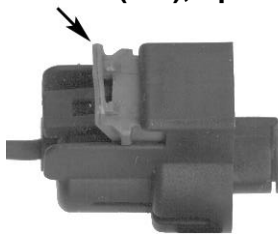
We recently received a purchased DOS758 core which still had the ignition terminal harness attached to the terminal. When disassembling the unit we found a potential cause for frustration and damage when removing the ignition terminal harness. The harness has a double lock. Until the first lock is opened, the second lock will not properly function. It is conceivable that one can remove the harness from the terminal without opening the first lock, but damage to the ignition terminal should be expected. Until one is aware of this, it could be very easy to overlook the double lock system when you are under the car, on your back, attempting to remove the starter.

Below are images of the harness plug. Image 1 shows the red lock locked. Image 2 shows the red lock open. Image 3 shows the 2nd lock, which is pressed down to open, allowing the harness to be removed from the ignition terminal.

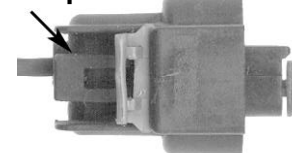
Lock 1 (red), locked



Lock 1 (red), open



Lock 2, press down to open



The four starter PNs using this plug style will be shipped with an removal/installation advisory in the unit box. This will give a heads up to installers that take the time to read the literature sent with the unit. By doing so, the installer can keep his frustration to a minimum.

That's all for this month, we will see you in the April 2002 issue of the Live Wire! As always, thank you for choosing PPR as your alternator and starter supplier.

