

A tender/ maintainer will not fix a draw down issue but can help top off the batteries if you do not drive the truck long enough to charge them up. You need to find the problem.

Some things to do for more information.. Please humor us and me and do them.

First order a USB Volt meter cigar adapter and plug it into the port for constant monitoring. Once things are fixed here are some useful numbers. 12.6 volts is proper resting voltage. When you key on with the WTS and all or most of the glow plugs are on you should see about 11.5 volts, if not you have a solenoid issue or several glow plugs bad. After about two minutes of running and your glow plugs cycle off you should see about 14.0 - 14.4 volts depending on the temperature and state of charge. Keep an eye on these numbers and you can head off issues. Remember if your voltage drops below 10 volts your PCM will drop out and you will have a fail to start.

Please use a proper volt and ohm meter for this, not a test light.

Pull your batteries or at least completely disconnect both from the truck and charge them completely and separately for several hours with a proper charger with a rate of at least 20 or more amps. After they have been charged let them sit untouched for about three or more hours. If the batteries do not hold at least 12.6 volts at rest do the charge procedure again and then re check. If your batteries do not hold 12.6 volts consider them bad.

Keep in mind that this is not the best way to test the batteries but it gives part of the story. The best way to properly test the batteries is take them to the local truck stop and have them use the big resistive tester on them. The corner store hand-held will not do the job properly and is almost a waste of time.

Time to get a bit dirty....

Physically move, bend, twist, look at, inspect with hands and eyeballs every primary cable. Look for any signs of corrosion current and past. Surface cleaning corrosion does not fix the fact that you damaged cables that have high internal resistance. Stiff cables near the connections will be a sign of prior corrosion that has damaged the cable. Look for burns and discoloration. Any signs of a bad cable needs to be properly addressed with a replacement. Do not get the replacement from your corner store, cramazon, or fleebay. There are a few reputable sources for quality parts and if you need some ask we will lead you down a good path.

Insure that your grounds (one for each battery) on the block below the balancer are tight (put the wrench on all of them) and clean. Check the ground jumper from the block to the frame. Up top check the ground to the fender from the battery clamp, may be one on each side. While you are under the truck slide back and check the connections on the starter, not part of the drain issue, but heck, you are on your back under the truck anyway.

Check the connection from the passenger side battery to the starter solenoid, check all connections at the solenoid.

Check the connections at the alternator, primary feed and molded plug.

After you verify the batteries are good hook them back into the truck properly.

Check each battery to ground and you should still have 12.6 volts or maybe a bit more. If for some reason the batteries do not match you have a cross over cable issue or a ground issue that you missed.

Check the voltage at the starter solenoid, it should match the battery voltage.

Check the voltage on the molded plug (center pin I believe) for the alternator again it should match the battery voltage.

Check the voltage at the alternator feed, you guessed it battery voltage.

Start the truck and let it idle for a few minutes so that the glow plugs cycle off.

Check the voltage at each battery to ground and you should have the noted 14.0 - 14.4 volts. If the batteries do not match again you missed proving the grounds and crossover cable. If you do not have the previously stated voltage suspect the alternator, may be the fuse link for the feed to the starter solenoid. Verify output voltage on the alternator post to verify the issue.

Now for the draw down issue.

Exercise extreme care with the nest steps, you are going to have full battery voltage and amps on these feeds while doing the checks.

Insure all aftermarket accessories are off, doors are closed, all lights off, hood light unplugged.

The alternator may be the issue so here is how we check the diode that is sometimes an issue. You will need to set up your meter to check AMP draw. Unhook the feed at the alternator and place the meter in the circuit in series. You should not see any current flow here, if so get a new alternator. This issue can kill the batteries overnight. Remember this feed has battery voltage on it and it will blow the fuse links if you drop it on the engine.

If you have proven no draw on the alternator hook it back up properly.

For the next step I like a pair of good gator clamps so that I do not need to hold the meter and leads to the truck main cables. You will need your hands free for these next steps. I like to do this on the passenger side battery but it does not matter which side you do it on. You will need to disconnect the ground from the battery and connect the gator clamp to the post and cable with the meter. If you have a bad draw down on the batteries you may blow the fuse in the meter as most are 10 amps. If you do blow the fuse in the meter start again by pulling fuses in the fuse box and put them in one at a time. Make sure you use the proper fuse in the proper spot. You do have the manual, don't you????

You will always have a small bit of draw even with everything off. The computers as basic as they are will have a draw but not much.

I am willing to bet if everything previous checked out you now have something in the amp range draw. You now need to pull one fuse at a time. I would suggest starting with fuse 15 the ECM (should be a 5 amp fuse) as it will also keep the curtsey lights off while checking everything else.

Check the draw after removing one fuse at a time. Check the meter each time you pull a fuse. If no change put the fuse back and try another fuse. When you have a change on the amp draw you found at least one of the issues, keep that fuse out. Check all of them, even under the hood fuses. If you have aftermarket items check those first.

For the most part you should not see more than about .05 amp draw with everything off, preferably a bit less.

Let us know you progress.