

**Larry Beckner**  
**8551 E. Yearling Road**  
**Scottsdale, AZ 85255**

August 28, 2019

Scott Wixson  
Customer & Product Support Manager, Specialty Vehicles  
Hunter Smith  
Customer & Product Support Lead, Specialty Vehicles  
Spartan Motors  
1541 Reynolds Road  
Charlotte, MI 48813

Dear Scott and Hunter:

This letter will provide information regarding a serious Spartan-related on-the-road failure Amy & I recently experienced with our 2018 Entegra Cornerstone.

On Friday, August 23, 2019 we were traveling from Lewistown, Montana to Dickinson, North Dakota – a distance of 345 miles. Our route was fairly simple:

US 87 east from Lewistown, MT to Grass Range, MT – 32 Miles  
Montana 200 from Grass Range, MT to Glendive, MT – 215 Miles  
Interstate 94 from Glendive, MT to Dickinson, ND – 98 Miles

Montana 200 is a generally good two-lane highway, but between the small towns of Jordan, MT and Brockway, MT there is a 40 mile stretch that is very narrow and has no shoulder whatsoever on either side of the road. In other words, there is literally no place to pull over if a problem arises. It's not even possible to pull off into the weeds, because if you did you'd immediately be in a deep ditch. That's best case; in many sections of the 40 miles there are drop-offs of 10 feet or more on both sides of the roadway.

About 20 miles into the 40 miles of narrow highway, near mile marker 243, at approximately 1:00 PM local time we got an alarm indicating high engine coolant temperature. That was strange given that the outside air temperature was only 75 degrees, we were only traveling about 55 MPH, and we weren't in an area with any hills to speak of. The gauge on the dash was reading approximately 230 degrees when the alarm sounded.

I wasn't sure what to make of the situation, and I considered the possibility the alarm might actually be erroneous. I monitored the gauge for the next several miles and watched it climb steadily higher. Near mile marker 247, the gauge pegged at 240 degrees and a message appeared advising an immediate shut down of the engine.

Take a moment to imagine this situation. A narrow two lane road. No shoulder – none. No way to pull off into the weeds. Lots of small ups & downs in the highway, limiting forward visibility, so if we stop in the travel lane and turn on the emergency flasher lights, we still have a good chance of being rear-ended by an approaching vehicle or 18 wheel truck. Not to mention how long we'd be there before a tow truck or any other form of help might arrive.

While slowing down and contemplating what to do we got a huge break in the form of a sign indicating a rest area one mile ahead. Fortunately the engine continued running long enough for us to get there and get parked; i.e., it didn't automatically shut itself down – though I suspect it would have very soon if we hadn't been able to stop.

To elaborate on how lucky we were, the rest area where we stopped is the only one on the entire 215 miles of Montana 200 between Grass Range and Glendive. Had the failure occurred anywhere other than where it did, we would have been in a VERY bad situation.

Once parked in the rest area, I was able to assess the problem. A quick look revealed a significant volume of engine coolant on the ground, under the engine, and on the front end of the Jeep we tow. The coolant was all over the place under there, so it wasn't immediately possible to tell if there was a leak or if the engine had for some reason overheated, boiling coolant out of the recovery tank overflow hose.

I considered the possibility that the fan clutch had failed, resulting in inadequate air flow through the radiator. While waiting for everything to cool down, I used the two emergency bolts on the fan clutch pulley to lock the clutch so the fan would rotate continuously at full speed, just in case a clutch failure had been the cause of the overheating.

Once the engine had cooled down, I began adding water to the coolant recovery tank. Yes water – it wasn't like I had a choice since I don't carry gallons of coolant when we travel and the nearest source of any coolant – much less the proper coolant – was unknown miles away.

After adding several gallons of water to the recovery tank, I noticed water/coolant running out onto the ground under the coach. Crawling under the coach, I determined it was coming from a split in a 3/4" I.D. heater hose, near where the hose connected to a quarter-turn shut-off valve. I assumed that shut off valve and another one near it were related to the loop of heater hose that runs from the engine up to the dash heater core and back. Since then, I've learned there is a similar loop for the Aqua-Hot pre-heat function, so at this point I'm not sure which loop the failed hose was part of.

In any case, I turned off the two ball valves and have left them off. That didn't isolate the leak because the section of hose that failed runs between the engine and the shut-off valve, but turning the valves off at least protects against any similar hose failure upstream from the valves.

My next step was to cut off the failed section of hose. Below are two photos, the second of which has a dime inserted in the split of the hose to provide some perspective. This section of hose is about 2.5" long and the split is about 1.75" long.



Fortunately, there was enough slack in the hose to allow me to reconnect the hose to the fitting on the shut off valve after cutting off the failed section. I did that, topped off

the cooling system with water, left the fan clutch locked, and we hit the road for Dickinson.

Total time at the rest area – about three hours. Odometer when we arrived at the rest area – 23,991. Stress level before determining I could make a temporary repair to get us back on the road – mine was pretty high. Amy's – off the charts.

While I'm not an expert on heater hose, I have plenty of experience with it. Examining the failed section of this particular hose, it doesn't appear to me to be particularly high-quality hose. And a failure like this one at less than two years and just under 24,000 miles would suggest the hose was wholly inadequate for the application. I'd like to believe this wasn't a case of an uninvolved purchasing agent taking the lowest of X number of bids without regard for quality, but in any case I'm not exactly confident we won't experience another hose failure at some point in the future – perhaps the near future.

Maybe you'll tell me this is the first such failure Spartan has ever seen. Even if that's the case, it doesn't explain this particular failure. And for what it's worth, the split was on the top of the hose, not the bottom, so a theory that the hose was damaged by road debris prior to the failure is simply not valid.

I have a number of thoughts regarding how to proceed, but I'd like to hear from you and/or others at Spartan before doing anything. By the way, I'm addressing this letter to Spartan because several knowledgeable individuals at Entegra have assured me that Spartan, not Entegra, selects and installs the hose in question.

Amy & I are currently at Hearthside Grove in Petoskey, Michigan. Driving from the rest area where I made the temporary repair to Dickinson, ND with the fan clutch locked up, the engine coolant temperature stayed low – a little over 170 on the gauge. Before leaving Dickinson, I removed the locking bolts from the fan clutch, returning it to normal operation. In several days of driving since then, we experienced normal coolant temperatures; i.e., 180 to 200 degrees the entire time. So the fan clutch appears to be working exactly as it should.

We'll be leaving Petoskey on Monday, September 2 (Labor Day) to head to the Spartan service center in Charlotte for our annual service appointment on Tuesday, September 3. Please call or e-mail me yet this week so we can discuss the game plan while we're in Charlotte.

Yours truly,

*Larry*

Copies to: Joyce Skinner (Jayco/Entegra), Jacob Shearer (Jayco/Entegra), Ted Cook (Jayco/Entegra), Don Brubaker (Jayco/Entegra), Steve Guillaume (Spartan), Cris McCord (Spartan)