RPM + speed connections for datalogger

Posted by Simon - 28 Feb 2010 07:51

Hi all,

I am a student automotive engineering working on my thesis about the suspension of the 944 (type2/late).

For this I need to use a datalogger system (AIM Evo4) to log suspension movement but also RPM and speed.

I was wondering if anybody could point me in a direction for how to measure those two?

On the Trackvision gallery (www.trackvision.net/gallery.php) there is a movie from Jon Ariano who uses an AIM logger which shows RPM and speed.

Does anybody have any experience with getting RPM and speed hooked-up to an AIM datalogger?

Can I use the gearbox/tacho signal or should I just use a wheelspeed signal from the ABS?

Hope you can help me.

Best regards,

Simon

==========

Re:RPM + speed connections for datalogger

Posted by Weston - 17 Mar 2010 02:29

Simon wrote:

Hi all,

I am a student automotive engineering working on my thesis about the suspension of the 944 (type2/late).

For this I need to use a datalogger system (AIM Evo4) to log suspension movement but also RPM and speed.

I was wondering if anybody could point me in a direction for how to measure those two?

On the Trackvision gallery (www.trackvision.net/gallery.php) there is a movie from Jon Ariano who uses an AIM logger which shows RPM and speed.

Does anybody have any experience with getting RPM and speed hooked-up to an AIM datalogger?

Can I use the gearbox/tacho signal or should I just use a wheelspeed signal from the ABS?

Hope you can help me.

Best regards,

Simon

Can't speak to the AIM system specifically, but for RPM on my Traqmate, I just connected it to the ignition signal wire going from the DME to the ignition coil. It's Pin #1 on the DME wiring connector.

For speed, I would just use the datalogger's own calculation... that's going to be simpler and more accurate than any vehicle speed sensor, which would require you to work out how volts or pulses relate to MPH, and it would still be affected by wheel spin/slip and such.

==========

Re:RPM + speed connections for datalogger

Posted by Sterling Doc - 17 Mar 2010 02:57

_____

Weston, any special devices or software neeeded to capture this on the TM? Or just a wire (to where on unit)?

==========

Re:RPM + speed connections for datalogger

Posted by Weston - 17 Mar 2010 13:43

Sterling Doc wrote:

Weston, any special devices or software neeeded to capture this on the TM? Or just a wire (to where on unit)?

Yeah, you need the "TraqTach" RPM input module, or the "TraqData" module. I got the TraqData II module and have it logging things like RPM, coolant temp, oil pressure, etc.

==========

Re:RPM + speed connections for datalogger

Posted by maxcar - 14 Apr 2010 05:36

I'm also curious about a good rpm input for data logging. I have an other type of data logger and of course it needs some kind of input to log rpm. I was thinking of hooking onto one of the three wires at the hall sensor, but I'd rather use some kind of signal wire at the tachometer. Has anyone here done this and know which wires to look for? Or maybe there's a better solution? I have tried to check the workshop manual wiring diagrams, but I don't find them very easy to understand. I'd appreciate any help with this.

Oh, and the car is a 1990 944 S2

==========

Re:RPM + speed connections for datalogger

Posted by 944DR - 16 Apr 2010 04:50

First off, let me state that I have never worked on an S2. However, I have an electrical engineering background and, out of curiosity, I took a look at the Porsche Factory schematics. I have installed the TraqMate Tachometer signal input for my early'85 944

The first thing I noticed is that yourâ□□92 S2 has a more sophisticated ignition system then my older 944. While I was able to tap into the DME wire running directly to the coil, your system goes from the DME to a Ignition Final Stage and then on to the coil. Another difference is that your tachometer seems

to have its own Hall Effect device for the tachometer. In my older 944, the tachometer and the coil are driven off the same DME output.

So, here are my suggestions:

1. An output signal from a Hall Effect device will tend to be a very weak signal and depending upon which one you tap into, it could inject electrical noise. This could result in a jittery tachometer at the least and some real ignition problems at the worst.

2. You could tap directly into Pin 1 of the DME (Green 1 mm wire). However, the schematic shows this as a shielded wire going to the Ignition Final Stage as an input. I would also be concerned about injecting electrical noise here also. (Perhaps you could post your question to Rennlist and get a response from someone more familiar with the later DMEs.)

3. The least objectionable route would be to tie into the 2.5 mm Green wire attached to the coil. This would be a rather robust signal with little chance of injecting electrical noise. Of course, your recording device interface should be set up for a coil connection.

Good luck and let us know what you finally came up with.

Dale

==========