



IS IT REALLY THE SENSOR?

Send

From... Lambda Sensor 1

To... Engine Control Unit

Account ▾ Subject: Working Relationships...

Dear Engine Control Unit,

Recently I have been sending messages to you, to inform you that my voltage is low and unless there is something wrong with me, this is because there is far too much oxygen in the exhaust gas, meaning of course that the mixture is too weak.

I don't know how weak, I only know it's weak.

Normally you respond by increasing the fuel quantity in small amounts until my voltage is around 450mV and that works well for me. Then you record how much extra fuel has had to be injected in a temporary file called 'Short Term Fuel Trim'. However, I have no idea what this is because I am just the messenger. As I said, I am happy with 450mV, but it would appear that you're not, which would explain why you keep increasing the amount of fuel injected, until I report about 800mV then decrease it until I report 200mV.

I am not sure why you do this, but it keeps me on my toes. Any way that's not what's happening now and my voltage is still low and it has been going on for far too long.

Kind Regards

Lambda Sensor 1

From: Engine Control Unit
To: Lambda Sensor 1
Subject: Re: Working Relationships...

Dear Lambda Sensor 1,

You are right your voltage is too low and I am aware of this. To get things right, I work from a book; I look at all the information I get from the other sensors then refer to my book to see how much fuel I need to inject to get the mixture right. Normally this works fine and you give me a reading of 450mV or near enough. If you report back that the voltage is too high or too low, I adjust the injection time slightly until you report 450mV.

This adjustment, as you say, goes into a file marked 'Short Term Fuel Trim'. I am obliged to do this for the OBD people; it's so the mechanic can see what's going on. Anyway, recently you have been reporting a voltage that's far too low and I have been increasing the amount of fuel I inject and it has made no difference. In fact, I have entered into the temporary file (Short Term Fuel Trim), a figure of 33%, which is way out of line, and because of that I have reported you to the driver, who will take us to the garage to find out what's wrong.

With all due respect, I can cope with you not giving me the 450mV I am looking for (even if you continually give me a low or high reading), and I will simply adjust the fuel until you give me what I want and then I'll record it in another temporary file called 'Long Term Fuel Trim'. This way, I'll know how to cope with you next time, but if you continually cause me to add or take away a large amount of fuel, I have no option but to report you.

P.S You are right about the 200-800 mV thing, it's to keep you on your toes so I know you are working.

Kind regards

Engine Control Unit

From: Lambda Sensor 1
To: Engine Control Unit
Subject: Re: Re: Working Relationships...

Dear Engine Control Unit,

This really is an unfortunate situation but hey, don't blame me, I only tell it as it is! To tell you the truth I am brand new to this job and we haven't been working together long, but if we go on like this I'll be replaced before you know it.

My predecessor was telling you exactly the same thing! Have you thought it might be an air leak or that the airflow meter has thrown a wobbler again? Not being funny but it's always me isn't it?

Regards

Lambda Sensor 1

From: Engine Control Unit
To: Lambda Sensor 1
Subject: Re: Re: Re: Working Relationships...

Dear Lambda Sensor 1,

Not my job mate! 😊

All the best
Engine Control Unit